BAY AREA AIR QUALITY MANAGEMENT DISTRICT

BOARD OF DIRECTORS
EXECUTIVE COMMITTEE MEETING

COMMITTEE MEMBERS

JERRY HILL – CHAIR
BRAD WAGENKNECHT - SECRETARY
JOHN GIOIA
MARK ROSS
GAYLE B. UILKEMA

PAMELA TORLIATT – VICE CHAIRPERSON
CHRIS DALY
SCOTT HAGGERTY
TIM SMITH

MONDAY
SEPTEMBER 29, 2008
9:45 A.M.

4TH FLOOR CONFERENCE ROOM
DISTRICT OFFICE

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 JUNE 11, 2008**

4. **HEARING BOARD QUARTERLY REPORTS – APRIL 2008- JUNE 2008** **T. Dailey/5073**
tom.dailey@kp.org

5. **ADVISORY COUNCIL ACTIVITIES AND RECOMMENDATIONS** **L. Bedsworth/5127**
bedsworth@ppic.org

Louise Bedsworth, Chairperson of the Advisory Council will provide an update of the Council's activities and recommendations on a Strategy Relative to Asthma and Indoor Air Quality and Principles developed in response to the Air Resources Board's, AB32 Climate Change Draft Scoping Plan request for comments.

6. **JOINT POLICY COMMITTEE UPDATE**

J. Roggenkamp/4646
jroggenkamp@baaqmd.gov

Ted Droettbomm will provide an update on the activities of the Joint Policy Committee.

7. **DISCUSSION AND POSSIBLE RECOMMENDATIONS ON THE ADVISORY COUNCIL'S ROLE** **J. Broadbent/5052**
jbroadbent@baaqmd.gov

The Committee will discuss the Advisory Council's role and provide direction to staff.

8. **OUT OF STATE TRAVEL POLICY DISCUSSION** **J. Broadbent/5052**
jbroadbent@baaqmd.gov

As directed by the Board of Directors, the Committee will discuss and review the Air District's Out of State Travel Policy.

9. **UPDATE ON OTHER POST EMPLOYMENT BENEFITS (OPEB) LIABILITY**
J. Broadbent/5052
jbroadbent@baaqmd.gov

The Committee will receive an update and be presented with options on actions to address the Air District's OPEB liability from previous years.

10. **OVERVIEW AND DISCUSSION OF AIR DISTRICT'S 2009 CLEAN AIR PLAN**
J. Roggenkamp/4646
jroggenkamp@baaqmd.gov

The Committee will receive an overview of the Multi-Pollutant approach for the Air District's 2009 Clean Air Plan.

11. **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).

12. **TIME AND PLACE OF NEXT MEETING: AT THE CALL OF THE CHAIR**

13. **ADJOURNMENT**

CONTACT EXECUTIVE OFFICE- 939 ELLIS STREET SAN FRANCISCO, CA 94109 **(415) 749-5073**
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.
- Any writing relating to an open session item on this Agenda that is distributed to all, or a majority of all, members of the body to which this Agenda relates shall be made available at the District's offices at 939 Ellis Street, San Francisco, CA 94109, at the time such writing is made available to all, or a majority of all, members of that body. Such writing(s) may also be posted on the District's website (www.baaqmd.gov) at that time.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
939 ELLIS STREET, SAN FRANCISCO, CALIFORNIA 94109
(415) 771-6000

EXECUTIVE OFFICE:
MONTHLY CALENDAR OF DISTRICT MEETINGS

SEPTEMBER 2008

TYPE OF MEETING	DAY	DATE	TIME	ROOM
Board of Directors Climate Protection Committee Meeting *(Meets 3rd Thursday Every Other Month)*	**Thursday**	**18**	**9:30 a.m.**	**4th Floor Conf. Room**
Joint Policy Committee	**Friday**	**19**	**10:00 a.m. – 12:00 p.m.**	**MTC 101 - 8th Street Oakland, CA 94607**
Board of Directors Legislative Committee *(Meets 4th Monday of the Month)*	**Monday**	**22**	**9:30 a.m.**	**4th Floor Conf. Room**
Board of Directors Budget & Finance Committee *(Meets 4th Wednesday of each month)*	**Wednesday**	**24**	**9:30 a.m.**	**4th Floor Conf. Room**
Board of Directors Mobile Source Committee *– (Meets 4th Thursday of each Month)*	**Thursday**	**25**	**9:30 a.m.**	**4th Floor Conf. Room**
Board of Directors Public Outreach Committee *(Meets 1st Thursday every other Month)*	**Friday**	**26**	**9:30 a.m.**	**4th Floor Conf. Room**
Board of Directors Executive Committee - *(At the Call of the Chair)*	**Monday**	**29**	**9:45 a.m.**	**4th Floor Conf. Room**

OCTOBER 2008

TYPE OF MEETING	DAY	DATE	TIME	ROOM
Board of Directors Regular Meeting *(Meets 1st & 3rd Wednesday of each Month)*	**Wednesday**	**1**	**9:45 a.m.**	**Board Room**
Advisory Council Air Quality Planning Committee *(Meets 1st Thursday Even Month) –* **RESCHEDULED TO THURSDAY, OCTOBER 16, 2008**	**Thursday**	**2**	**9:30 a.m.**	**4th Floor Conf. room**
Advisory Council Technical Committee *(Meets 1st Monday of every even Month) -* **RESCHEDULED TO WEDNESDAY, OCTOBER 22, 2008**	**Monday**	**6**	**9:30 a.m.**	**Board Room**
Advisory Council Public Health Committee – *(Meets 2nd Wednesday Even Month)*	**Wednesday**	**8**	**1:30 p.m.**	**Board Room**
Board of Directors Regular Meeting *(Meets 1st & 3rd Wednesday of each Month)*	**Wednesday**	**15**	**9:45 a.m.**	**Board Room**
Advisory Council Air Quality Planning Committee *(Meets 1st Thursday Even Month)*	**Thursday**	**16**	**9:30 a.m.**	**Board Room**

October 2008 Calendar Continued on Next Page

OCTOBER 2008

TYPE OF MEETING	DAY	DATE	TIME	ROOM
Board of Directors Budget & Finance Committee *(Meets 4th Wednesday of each month)*	**Wednesday**	**22**	**9:30 a.m.**	**4th Floor Conf. Room**
Advisory Council Technical Committee *(Meets 1st Monday of every even Month)*	**Wednesday**	**22**	**9:30 a.m.**	**Board Room**
Board of Directors Mobile Source Committee *– (Meets 4th Thursday of each Month)*	**Thursday**	**23**	**9:30 a.m.**	**4th Floor Conf. Room**
Board of Directors Legislative Committee *(Meets 4th Monday of the Month)*	**Monday**	**27**	**9:30 a.m.**	**4th Floor Conf. Room**

NOVEMBER 2008

TYPE OF MEETING	DAY	DATE	TIME	ROOM
Board of Directors Regular Meeting *(Meets 1st & 3rd Wednesday of each Month)*	**Wednesday**	**5**	**9:45 a.m.**	**Board Room**
Board of Directors Public Outreach Committee *(Meets 1st Thursday every other Month)*	**Thursday**	**6**	**9:30 a.m.**	**4th Floor Conf. Room**
Advisory Council Executive Committee Meeting *(Meets 2nd Wednesday Every Other Month)*	**Wednesday**	**12**	**9:00 a.m.**	**Room 716**
Advisory Council Regular Meeting *(Meets 2nd Wednesday Every Other Month)*	**Wednesday**	**12**	**10:00 a.m.**	**Board Room**
Joint Policy Committee	**Friday**	**14**	**10:00 a.m. – 12:00 p.m.**	**MTC 101 - 8th Street Oakland, CA 94607**
Board of Directors Regular Meeting *(Meets 1st & 3rd Wednesday of each Month)*	**Wednesday**	**19**	**9:45 a.m.**	**Board Room**
Board of Directors Climate Protection Committee Meeting *(Meets 3rd Thursday Every Other Month)*	**Thursday**	**20**	**9:30 a.m.**	**4th Floor Conf. Room**
Board of Directors Legislative Committee *(Meets 4th Monday of the Month)*	**Monday**	**24**	**9:30 a.m.**	**4th Floor Conf. Room**
Board of Directors Budget & Finance Committee *(Meets 4th Wednesday of each month)*	**Wednesday**	**26**	**9:30 a.m.**	**4th Floor Conf. Room**

HL
9/17/08 (12:45 p.m.)
P/Library/Forms/Calendar/Calendar/Moncal

AGENDA: 3

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Jerry Hill and Members of the Executive Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: September 5, 2008

Re: Executive Committee Draft Minutes

RECOMMENDED ACTION:

Approve attached draft minutes of the Executive Committee meeting of June 11, 2008.

DISCUSSION

Attached for your review and approval are the draft minutes of the June 11, 2008 Executive Committee meeting.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

AGENDA: 3

Bay Area Air Quality Management District
939 ELLIS STREET
SAN FRANCISCO, CALIFORNIA 94109
(415) 749-5000

DRAFT MINUTES

Summary of Board of Directors
Executive Committee Meeting
10:00 a.m., Wednesday, June 11, 2008

1. Call to Order - Roll Call: Chair Jerry Hill called the meeting to order at 10:00 a.m.

Present: Jerry Hill, Chair, Chris Daly, Tim Smith, Pamela Torliatt, Gayle B. Uilkema, Brad Wagenknecht.

Absent: John Gioia, Scott Haggerty, Mark Ross

2. Public Comment Period: There were none.

3. Approval of Minutes of May 12, 2008: Director Torliatt Smith moved approval of the minutes; seconded by Director Smith; carried unanimously without objection.

4. Status Report On Discussions With The Bay Area Environmental Health Collaborative On A Proposed Resolution To Address Cumulative Impacts: *The Committee received a status report on discussion with the Bay Area Environmental Health Collaborative on a proposed resolution to address cumulative impacts.*

Mr. Broadbent provided an update on the Air District's efforts to work with the Bay Area Environmental Health Collaborative, stating they are continuing to meet and further refine the draft resolution, which outlines the Air District's efforts to address cumulative impacts in various communities. The meetings have been successful and they are close to finalizing the draft resolution. He recommended next steps which include meeting with representatives from industry to fully complete the public process and thereafter, bringing the final draft resolution to the full Board of Directors.

Public Comments:

Bradley Angel, Director of Green Action and speaking on behalf of BAEHC, echoed Mr. Broadbent's comments.

Director Uilkema discussed recent changes in land use policies in her District, citing factors of subdivisions adjacent to freeways, and she asked that land use perspective be included in moving forward. Mr. Broadbent responded by stating that land use guidelines are being developed separately and he hopes for their formalization to be complete by the end of the year.

Vice Chair Torliatt referred to the first NOW, THEREFORE, BE IT RESOLVED clause and while she understands the intent is to deal specifically with impacted communities, she believed the Air District takes seriously all communities throughout the Bay Area.

LeaOtis Martin, BAEHC, Bay View resident, said he has lived at Hunter's Point since 1966 and voiced concern about his family's health issues and pollution impacts in the area.

Committee Action: Mr. Broadbent confirmed with the Executive Committee that unless there are major changes to be made to the resolution, staff will move forward and bring the final draft Resolution before the Board of Directors after meetings have occurred with industry representatives.

5. Consideration Of Community Grant Program: *The Committee considered recommending Board of Directors' approval of a community grant program*

Mr. Broadbent said staff followed up on the Committee's request to return with information and he presented charts showing total violations issued, monies collected, violations resolved, inspections, air pollution complaints, permitted sources and impacted communities. He said the concept and original intent was to take a portion of the excess amount budgeted for penalties and to establish a program that would serve to provide funds, which would help in terms of building community projects. This would be done in lieu of SEP's and the establishment of a community grant program would be a fixed line item in the Budget.

Mr. Broadbent further stated that a single, clear approach to allocation does not emerge, and therefore, he recommended establishing an annual Bay Area-wide community grant program with a fixed budget, with an initial amount of $100,000 for FY 2008/09. He discussed an example of a project designed to reduce greenhouse gasses, which benefitted San Francisco Community Power that replaced old wiring, change out of old bulbs to fluorescent lighting, replacement of old refrigerators and improved safety and quality of life benefits.

Committee discussion ensued. The Committee provided direction to staff. Mr. Broadbent said he was hearing comments from the Committee that require more refinement of the program and suggested for those cases where there is direct impact, the Air District can take its existing staff resources to those communities. He agreed to refine the program and bring it back in the fall. Director Uilkema requested increasing the grant program amount above $100,000.

Committee Action: None. This report provided for information only.

6. Consideration Of Recommendations Regarding Air District Foundation: *The Committee considered recommending Board of Directors' approval of various decisions necessary to establish a nonprofit entity to support the Air District.*

Mr. Bunger discussed the recommendation to establish a supporting organization for the Air District, that the District be its sole member as a shareholder, and discussed recommended names for the nonprofit entity. The Board discussed the entity's nonprofit status in comparison to a parks foundation where donations and contributions can be made tax-free. Funding could be dedicated towards research on greenhouse gasses, outreach for the Spare the Air and climate change programs. Staff requested authorization to be able to write a broad scope of service. Mr. Bunger discussed legal activities allowed

by the Foundation, consequences of illegal activities, language proposed in the Draft Articles, dedication of assets, staffing the Foundation, audit requirements, bylaws and the recommendation for a 3-9 member Board where no more than 49% can be employees of the Foundation, the recommendation for two-year terms with consecutive 3 year terms with a one-year hiatus. The Bylaws would provide for the provision of statutory committees. The recommendation would be brought to the full Board of Directors at its July 9, 2008 meeting.

Directors believed there was potential to realize some large benefits of forming a Foundation and agreed with the recommended range of the Foundation having 3-9 members.

Committee Action: Director Smith moved that the Committee recommend that the Board of Directors approve moving forward to establish a nonprofit entity to support Air District programs; seconded by Director Wagenknecht; carried unanimously without objection.

7. **Consideration Of Recommendation Authorizing The Executive Officer/APCO To Enter Into A Master Service Contract Agreement For Audit Services With Maze & Associates:** *The Committee considered recommending Board of Directors' approval to allow the Executive Officer/APCO to enter into a Master Service Agreement with Maze & Associates for audit services.*

Finance Manager Linda Serdahl provided a PowerPoint presentation on the Air District's efforts of selecting an auditor, discussed the Request for Proposal, response by firms, panel review and interview of the firms and recommended the Executive Committee recommend that the Board of Directors approve Maze and Associates as the District's auditors for the fiscal years ended June 30, 2008 through June 30, 2010.

Vice Chair Torliatt questioned the point and interview system and confirmed that Maze and Associates received a score of 88 points and were highly recommended due to their experience, knowledge with GASB 45 and overall response to the RFP and presentation.

Committee Action: Director Uilkema moved to recommend Board of Directors approval of a Master Services Agreement with Maze & Associates for audit services; seconded by Director Wagenknecht; carried unanimously without objection.

8. Establishing A Self-Insured Dental Plan: *The Committee received a report establishing a self-insured dental plan.*

Directors voiced agreement and support of the staff report and recommendation to establish a self-insured dental plan.

Committee Action: Director Uilkema moved to support the Air District establishing a self-insured dental plan; seconded by Director Smith; carried unanimously without objection.

9. CLOSED SESSION WITH DISTRICT'S LABOR NEGOTIATORS
(*Government Code § 54957.6(a))*

Agency Negotiators: *Jack P. Broadbent, Executive Officer/APCO*

Michael Rich, Human Resources Officer

Employee Organization: *Bay Area Air Quality Management District Employees' Association, Inc.*

District Counsel Brian Bunger reported that Directors took no reportable action in Closed Session, except to give direction to staff.

10. Committee Member Comments/Other Business: None

11. Time and Place of Next Meeting: At the call of the Chair.

12. Adjournment. The meeting was adjourned at 11:19 a.m.

/s/Lisa Harper
Clerk of the Board

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

TO: **Chairperson Jerry Hill and Members of the Executive Committee**

FROM: **Chairperson Thomas M. Dailey, M.D., and Members of the Hearing Board**

DATE: **July 24, 2008**

RE: **Hearing Board Quarterly Report – APRIL 2008 – JUNE 2008**

RECOMMENDED ACTION:

This report is provided for information only.

DISCUSSION:

COUNTY/CITY	PARTY/PROCEEDING	REGULATION(S)	STATUS	PERIOD OF VARIANCE	ESTIMATED EXCESS EMISSIONS
Alameda/Livermore	**APCO vs. MASOOD AMINI-FILABAD, aka AMINI FILABAD and HAMID AMINI individually and d/b/a LIVERMORE BEACON SITE NO. C8876 (Accusation – Docket No. 3548) –** *Accusation and Request for Order for Abatement from regulation requiring compliance to operate with Permit to Operate and with permit conditions and from regulation limiting emissions of organic compounds from gasoline dispensing facilities*	**2-1-302** **8-7-301**	**Filed Amended Conditional Order for Abatement on June 26, 2008**	**===**	**===**
Alameda/Oakland	**G & Z, Inc., dba S.F. OAKLAND AUTO TRUCK PLAZA (Short-Term Variance – Docket No. 3554) –** *Variance from regulation limiting emissions of organic compounds from gasoline dispensing facilities and from regulation requiring compliance with permit conditions.*	**8-7-301.3** **8-7-302.14** **2-1-307**	**Granted**	**4-28-08 to 7-25-08**	**===**
San Francisco	**UNIVERSITY OF CALIFORNIA, SAN FRANCISCO (Interim and Regular Variance – Docket No. 3551) –** *Variance from regulation requiring compliance with permit conditions.*	**2-1-307**	**Withdrawn**	**===**	**===**
San Mateo	**CITY AND COUNTY OF SAN FRANCISCO, SAN FRANCISCO INTERNATIONAL AIRPORT (Short-Term Variance – Docket No. 3549) –** *Variance from regulation limiting the quantity of particulate matter in the atmosphere through the establishment of limitations on emission rates, concentration, visible emissions and capacity.*	**6-1-303.1**	**Withdrawn**	**===**	**===**

COUNTY/CITY	PARTY/PROCEEDING	REGULATION(S)	STATUS	PERIOD OF VARIANCE	ESTIMATED EXCESS EMISSIONS
San Mateo/Millbrae	**PENINSULA CLEANERS (Short-Term Variance – Docket No. 3555) –** *Variance from regulation limiting emissions of synthetic solvent from dry cleaning operations and other related operations, and to limit exposure to perchloroethylene, a compound identified as a toxic air contaminant by the California Air Resources Board.*	**11-16-309**	**Withdrawn**	**===**	**===**
Solano/Fairfield	**ASHLAND, INC. (Emergency Variance – Docket No. 3556) –** *Variance from regulation limiting emissions of organic compounds as defined in Section 8-6-207 from transfer operations at non-gasoline organic liquid bulk terminals and bulk plants.*	**8-6-302**	**Granted**	**6-5-08 to 06-06-08**	**===**
Sonoma/Petaluma	**TESORO SIERRA PROPERTIES, LLC (Short-Term Variance – Docket No. 3553) –** *Variance from regulation limiting emissions of organic compounds from gasoline dispensing facilities and from regulation requiring compliance with permit conditions.*	**8-7-302.3 2-1-307**	**Withdrawn**	**===**	**===**

NOTE: During the second quarter of 2008, the Hearing Board held four hearings.
A total of $5,514 was collected as Hearing Board fees and no excess emissions fees were collected during this quarter.

EXCESS EMISSION DETAILS

COMPANY NAME	DOCKET NO.	TOTAL EMISSIONS	TYPES OF EMISSIONS	PER UNIT COST	TOTAL AMT COLLECTED
					$ 0
				TOTAL COLLECTED:	**$ 0**

Respectfully submitted,

Thomas M. Dailey, M.D.
Chair, Hearing Board

Prepared by: Lisa Harper
Reviewed by: Mary Ann Goodley

AGENDA: 5

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson, Jerry Hill and Members of the Executive Committee

From: Louise Bedsworth, Ph.D., Chairperson Advisory Council

Date: September 17, 2008

Re: Advisory Council Activities and Recommendations

RECOMMENDATIONS:

Recommend Board of Directors approval, of the Advisory Council's Strategy for Asthma as it Relates to Indoor Air Quality and Principles developed in response to the California Air Resources Board's request for comments on its AB 32 Climate Change Draft Scoping Plan, at its October 1, 2008 meeting.

DISCUSSION:

Presented below are summaries of the key issues discussed at meetings of the Advisory Council and its Standing Committees during the above reporting period.

A) Technical Committee Meeting of April 7, 2008: The Technical Committee received a presentation by Dr. Rob Harley, University of California Berkeley, on the consequences of changes in temperature, inflow boundary conditions, and local emissions on Central California air quality.

B) Public Health Committee Meeting of April 9, 2008: The Public Health Committee reviewed and discussed the Final Draft "Strategy for Asthma as it Relates to Indoor Air Quality" for approval by the Board of Directors upon approval by the full Council. The Draft "Strategy for Asthma as it Relates to Indoor Air Quality is attached for the Committees review and consideration. The Committee also received an update on the Community Air Risk Evaluation (CARE) Program from Program Manager Dr. Phil Martien, including key findings of the West Oakland Health Risk Assessment.

C) Air Quality Planning Committee Meeting of April 10, 2008: The Air Quality Planning Committee received a presentation by Lisa Klein, Metropolitan Transportation Commission, on MTC's High Occupancy Toll Lanes Study. The Committee also received a presentation on the policy implications of road pricing strategies currently used and proposed for use in the Bay Area; the material was

presented by Tilly Chang and Zave Bent of the San Francisco County Transportation Authority.

D) Advisory Council Regular Meeting of May 15, 2008: The Council received a presentation on the Community Multi-scale Air Quality modeling system and its applications with regard to the effects of climate change on air quality and the relationships between air quality and human/ecosystem health by Dr. Rao, U.S. Environmental Protection Agency. The Council also received a report from Jeffrey McKay, Deputy APCO, outlining Air District activities.

E) Advisory Council Executive Committee Meeting of May 15, 2008: The Committee received reports from each of the Council's standing committees.

F) Technical Committee Meeting of June 9, 2008: The Committee received a presentation by Dr. Philip Duffy, Lawrence Livermore National Laboratory, on historical temperature trends, possible causes, projected future temperature trends and their uncertainties.

G) Public Health Committee Meeting of June 9, 2008: The Committee discussed and received an update on proposed Regulation 6, Rule 3: Wood-Burning Devices from Kelly Wee, Director of Compliance and Enforcement. The Committee moved to support the proposed rule.

H) Air Quality Planning Committee Meeting of June 16, 2008: The Air Quality Planning Committee received a presentation by Sonali Bose, San Francisco Metropolitan Transportation Authority, on transit funding. The committee also received a presentation by Theresa Rommell, Metropolitan Transportation Authority, on MTC's Regional Transportation Plan. In addition, David Wiley, Supervising Environmental Planner, provided a presentation on motor vehicle registration fees received by the District.

I) Advisory Council Regular Meeting of September 10, 2008: The Advisory Council received reports from each of its Committees. The Council discussed and reviewed recommendations presented by the A. Q. Planning Committee regarding Principles developed in response to comments to the California Air Resources on its AB32 Climate Change Draft Scoping Plan. The Committee unanimously agreed to forward the Principles to the Executive Committee for consideration by the Board of Directors. A copy of the Council's Principles is attached for the Committees review and consideration. The Committee also received a presentation from Ursula Vogel, Public Information Officer with the Metropolitan Transportation Commission on its Regional Transportation Plan 2035.

The minutes of the above referenced meetings are attached.

Respectfully submitted,

Louise Wells Bedsworth, PhD
Advisory Council Chairperson

Prepared by: Mary Ann Goodley
Reviewed by: Louise Bedsworth

AGENDA: 5A

Bay Area Air Quality Management District
939 Ellis Street
San Francisco, California 94109

APPROVED MINUTES

Advisory Council Technical Committee
9:30 a.m., Thursday, April 7, 2008

1. **Call to Order – Roll Call.** Chairperson, Kraig Kurucz called the meeting to order at 9:40 a.m.

Present: Sam Altshuler, P.E., Louise Bedsworth, Ph.D. (9:44 a.m.), Robert Bornstein, Ph.D., Fred Glueck, John Holtzclaw, Ph.D., and Kraig Kurucz, Chairperson

Absent: None

2. **Public Comment Period.** There were no public comments.

3. **Approval of Minutes of February 11, 2008.** Mr. Altshuler moved to approve the minutes. Dr. Holtzclaw seconded, and the minutes were approved with minor edits.

4. **Presentation on Consequences of Changes in Temperature, Inflow Boundary Conditions, and Local Emissions on Air Quality in Central California:** *Dr. Rob Harley gave a presentation to the Committee on consequences of changes in temperature, inflow boundary conditions, and local emissions on air quality in Central California.*

   Dr. Harley spoke acknowledged and thanked the people he works with directly on research and the USEPA, for sponsoring the research.

   Dr. Harley produced slides, graphs and charts illustrating the sensitivity of air quality in California to climate change, including anthropogenic emissions of TOC and NOx estimates for the state of California for calendar year 2005. A key question is what those emissions will look like in the future considering the following factors:

   - Growing population
   - Advancing technologies
   - Climate change

   Dr. Harley explained that the EPA's Community Multi-scale Air Quality model, CMAQ, is one of several models used to predict ozone and other concentrations in future emissions scenarios, and that CMAQ was applied to Central California for a Central California ozone study in the summer of 2000. Dr. Harley referred to reaction rates of chemistry and increases in temperature, noting two effects:

   - Changes of chemical reaction rates.
   - Feedback of temperature on the emissions of isoprene and natural VOC; on hotter days, those emissions will increase.

Also, between now and 2050, there is change in anthropogenic emissions, from growing population, emission control technology, and the new rules that the State and the Air Districts implement to further affect emission reductions in that timeframe. One other essential penalty is the background levels coming into the Bay Area from the Pacific Ocean, may change with global changes and industrialization in China. NOx emissions in China are increasing at a very high rate right now, and around the world there are reductions in air quality standards, providing additional challenges for emission control.

With a slide entitled Modeling Domain, Dr. Harley introduced the MM5, Mezzoscale Meteorological model, scaling temperature, topography and winds in the Central Valley, the Sacramento Valley, and the Bay Area.

Dr. Harley then compared anthropogenic and biogenic VOC emissions in peak values. Spatial distribution of those emissions was reviewed, noting biogenic VOC located exactly where there is not much anthropogenic VOC. The highest emissions of VOC were located in an area of natural forest, though not necessarily the most influential location with respect to ozone levels.

Noting the different chemical regimes the in the Central California domain, Dr. Harley added that there are two ways that chemistry ends or terminates; one being peroxide formations and, where NOx is more abundant, it terminates by forming nitric acid. There are high rates of chemistry terminating by forming nitric acid in the Bay Area and urban centers in the Central Valley, i.e., urbanized areas. There are high peroxide termination rates in the mountainous areas where NOx is scarce and natural VOC abundant. Rather that saying there is one control strategy, or chemical regimes, which will work throughout this region, what is seen are very different chemical regimes, depending upon location. Especially toward the more rural, remote, natural areas, there is a dramatic shift in the chemical regime away from the NOx-saturated to the NOx-limited.

Next, Dr. Harley considered the scenario of the future as a doubling of CO_2 relative to pre-industrial levels, and added that it is the scenario of two times CO_2 levels that has been used to drive the regional climate model.

Dr. Harley noted that, unlike global models, which typically have such large grid cells that they don't have enough resolution, the regional climate model provides more detailed information about California such as 40 kilometer scale information about:

- Temperature change
- Global warming information on a regional scale
- Range of regime,
- Saturation of topography

The domain of the regional model includes all of California, and was done through a monthly analysis. The climate modeling is pre-industrial 280 parts per million CO_2, and then there is an unknown year in the future, where CO_2 is doubling.

Using 40 kilometer square pixels, the regional climate model showed larger temperature increases, on the order of 4° Celsius in the Sierras, at the Nevada border, and smaller temperature increases, almost 2°, closer to the Bay Area. These were compared with the changes in ozone during the same period, indicating the effect of temperature on chemistry,

with the largest increases being south and east of San Jose in the Bay Area, and south near Fresno, and north near Sacramento.

Discussion regarding temperature variations and averages over time periods with regard to increasing the accuracy of the models ensued, and Dr. Harley noted that on the spatial side there had been some progress, on the temporal side more work could be done to produce results with more accuracy.

Dr. Harley then indicated a second effect of temperature change, an increase the biogenic VOC, or BVOC, emissions. The percent change in biogenic emissions, because of the same temperature increase was displayed in graphs, with larger percentage increases in biogenic VOC emissions, 40% or so, in the Sierras, where some of the largest temperature change is. A 20% increase was predicted in much of the more lower-lying areas. Although a big increase in biogenic VOC in the Sierras was visible, there was almost no change or a slightly negative effect on ozone there. Change in biogenic VOC is most influential in the Bay Area, where the chemistry is most strongly sensitive to VOC emissions. Dr. Harley stated that it is not that biogenic VOC are such major contributors to the budget of VOC emissions in the Bay Area; it is that our emission control programs are deliberately trying to starve the atmosphere of VOC in that area to lower ozone, and so any increments to VOC from climate change really have strong resonance in our local air quality, and again stressed the importance of influential over abundant VOC.

Dr. Bornstein discussed the change in biogenic VOC emissions and the saturating effects of enzymes, and asked Dr. Harley to explain the decrease in the mountains. Dr. Harley referred to the discussion held earlier and the supply of NOx being exhausted, stating there would be no NOx left to sustain ozone production.

Continuing with the presentation, Dr. Harley explained another aspect of future air quality, the change in anthropogenic emissions from present day to 2050. Typically people take an International Intergovernmental Panel on Climate Change (IPCC) scenario to provide a way of determining all the emissions in the United States. The regional model attempts to be more detailed than that. Different amounts of growth are expected along the coast; from the Central Valley, where the land prices are lower, higher rates of population growth are expected. In more extensive areas like the Bay Area, we expect a slower rate of population growth, or possibly higher density. Factors of change in emission include:

- Population growth, where you have the effect of higher growth reducing the emissions reductions. Lower percent reductions in areas where there is more growth.
- Technology change.

Future emissions were determined with the following assumptions and factors:

- In the year 2000, there was a baseline emissions inventory, which was not uncontrolled.
- There already had been some emission controls achieved, and so a further 80% level of control beyond what had already been achieved in 2000 was assumed.
- For carbon monoxide and VOC, there was about a 90% overall level of control.
- By 2050, the assumption is to obtain another 80% going to 90, 98% control.
- Population growth

- By NOx, it is only above 40%, but by 2050, they have a different end result.

Dr. Bornstein questioned if off-shore referred to shipping and/or aircraft. Dr. Harley said there were not a lot of shipping emissions and said the colors were not representative of this. Dr. Bornstein said he did some work with Environ for the District and volunteered to do the shipping emissions and it turns out that in the Emission Model or the Mechanics Model, they were assumed as uniform, but he checked the rate at which boats leave and come into the Bay Area, and in fact, there were variations up to a factor of 3. So the simulations done here by the District and Environ took in a day-to-day variation and not just the month to month. Dr. Harley then exhibited graphs which displayed the change in air quality, by the year 2050, in overall emissions for the region, with a 20% decrease in the San Jose area and Fresno, and in the air flowing into the Bay Area from the Pacific Ocean, i.e., inflow boundary conditions (BC) including change in:

- Diesel NOx, which is a whole issue, still largely uncontrolled.
- CO: from 80 to 104 parts per billion (ppb)
- CH_4: from 1.7 to 2.4 ppb
- Ozone: from 30 to 40 ppb

Combined simulations, using temperature effects and change in temperature in combination with year 2050 air quality, indicated changes in ozone (ppb) for the region. Additional effects, contributing to greater sensitivity, were enumerated and
Dr. Harley expanded on some of the additional negative effects incurred with climate change, such as:

- Population growth
- Loss of natural reservoirs in the form of snow in the Sierras, due to temperature increase
- Sea-level rises
- Longer hotter dry seasons creating environmental stresses and forest fires,
- Health effects on individuals

Finally, a summary of ozone effects in the Fresno, Sacramento, and Bay Areas and projections into year 2050 was reviewed. Dr. Harley then responded to questions and comments from Council members regarding inversion formation and depletion considerations in modeling (captured by the MM5 model, but not a consideration in the regional model), magnitude and frequency in ozone peak measurement, episodes resulting from multiple-day events, constancy of influences from inflow from boundary conditions, precipitous or steep change in ozone gradient from off-shore Bay Area to south of Monterey Bay, contribution of shipping as a source of NOx, meteorology, weekend effect retroactive study, accuracy in measuring full decreases of ozone in view of coastal cooling, land use changes, and various factors in simulations.

Saffet Tanrikulu, Air District Research and Modeling Manager, joined in a discussion of visible warming in the Bay Area up to 1990. He said as it gets warmer in the global warming models, the inversion, if it stayed the same, would be decreased more rapidly but the inversion could be getting more intense. It depends upon what is causing the inversion to form. He said MM5 captures all of those interactions and this could be reviewed to determine whether if between now and 2050 the inversion is more intense, less penetrated, or other characteristics are revealed.

In response to a question from Chairperson Kurucz as to whether all work is on the peak ozone day, it was stated that the ozone standard is magnitude and frequency. If the frequency goes up but the magnitude does not, it is not good for us, as well.

Mr. Altshuler questioned whether the modeling indicates, using the 2050 year, that there might be greater frequency of those episodes that last multiple days. Dr. Harley said consistent frequency will make individual days worse, and he discussed instances which would influence impacts and results given design values and measurements.

Chairperson Kurucz asked if the influences from the boundary condition between now and 2050 are presumed to remain constant, or was it a factor that showed the boundary condition emissions coming across the ocean were increasing to 2050. Dr. Harley said the changes are all relative to present day because of the changes in boundary conditions that are noted at the bottom of the slide.

- Forest fires
- Frequency, as well as severity of high-ozone events
- Spatial and temporal details of how temperature changes
- Nighttime versus daytime temperature changes
- How anthropogenic emissions and population change will proceed over the next decades.

Dr. Bornstein said forgetting about the anthropogenic emissions, it shows that offshore, as you approach the coast, there is less background ozone. He asked if they could project that backwards because it looks like there is a rapid decrease, and it seemed to him that the background impact should be more uniform, as it falls off rapidly offshore.

Mr. Tanrikulu said the chemistry seems steep from the western boundary coming in, and the issue is the NOx boundary condition specified, the guidance of which they received from the CARB on what to use. The couple of PBB of NOx in the inflow boundary which is way too high for clean maritime air over the ocean. What is seen on the edge is a reaction of ozone with high levels. PBB of NOx is not a lot once on land and there are polluted conditions, so what he believes is assumed is that there is some recirculation of pollution that is bring some NOx out over the ocean, and this is the reason for it falling off so rapidly. He said another reason for NOx could be shipping emission lanes going up and down the coast.

Dr. Bornstein suggested looking at the meteorology for 2050 to see if it also was a year that was conducive to high ozone. If there was a year that was conducive for low meteorology and you still got higher, then it could be that for the same meteorology of 2000, you would get even much higher in 2050. Just to show 2050 has a small difference does not really same that for the same meteorology you are going to get more pollution in 2050. 2050 could have been a clean year in terms of meteorology at least, so an average position of high or frequency of some meteorology could be done in order to show that the two sets were about the same, except that there is climate change. But if you were at a different part of the cycle, then the climate change is taking this meteorology and bringing up a little bit rather than starting the year and bringing in the meteorology up here, and he believed this could be done using the output net fields.

Dr. Holtzclaw questioned if anyone has gone back in time to see whether the climate change we have already experienced may have impacted the ozone levels that were already measured and recorded. Mr. Altshuler said the ozone level he trusts goes back to about 1980. He said he knows work has been done on the climate elements of how observed temperatures have changed over that time period, so he believed they have a stronger sense of what has happened on the meteorological side. The problem on the air quality side is that between 1980 and present day, especially in the earlier phase, there was such a dramatic improvement due to changes in anthropogenic emissions and emission control programs. So it would then be difficult to separate the effect of climate change from the effect of success in controlling local emissions, plus meteorological variability.

Dr. Bornstein said when they first found this cooling, they approached Bart Croes of CARB, and he was very intrigued and said, simulating the emission reduction does not capture the full decrease in ozone; the models are unable to capture the full decrease. And Mr. Croes thought the missing decrease in ozone could be due to coastal cooling. So, Mr. Croes encouraged Dr. Bornstein to write a proposal which was revised and resubmitted this year, and hopefully, this week the Executive Committee is going to make the final decision of their proposal. Hopefully, some money from CARB might also be obtained. He said then someone recently told him that the models have been fixed and they no longer under-estimate the rate of ozone decrease, and he felt it was possible to go back and simulate the last 25 years, both with coastal cooling and the emission reduction.

Mr. Tanrikulu said he believed that what is clear and very interesting to do that is amenable to a modeling approach which is to hold the emissions constant and change the meteorology in the way described and see what the magnitude of that effect is. There is then a clear signal that you're not changing emissions. Therefore, you can exclude certain variables from the analysis by holding them constant and then look at some of the other effects individually. This would be a very compelling analysis and important thing to consider. There might be a local benefit but a downwind dis-benefit, as well.

Dr. Bornstein said they have a Ph.D. student who is doing this and he has done only the meteorology so far and not all of it, and he is also including land use changes in terms of urbanization, irrigation changes, etc. He is focusing on the Los Angeles Basin because the land use changes are simpler. He has done preliminary simulations with the Bay Area also and he does get coastal cooling and a deeper sea breeze penetration, but is just in the beginning of getting the simulations correctly done.

Mr. Tanrikulu, discussed measurements going back to 1960, using the National Weather Service. Dr. Bornstein noted that if one looks at the global data set, it stopped warming in the mid-90's; however, this includes the ocean and the atmosphere and the ocean has cooled off because of the transition from El Nina to La Nina, but the land is still warming at the same tremendous rate it was until the mid-90's. So if someone shows data from the whole Earth and it doesn't show warming since the mid-90's; that is because it is dominated by the ocean, but the land sites are warming.

Mr. Tanrikulu said they would be happy to report their findings in a future meeting. Dr. Bornstein said Phil Duffy may attend the next meeting to discuss climate change, and Dr. S.T. Rao separately was to also provide a discussion about current and projected plans of modeling at the EPA, and he said a report from the Air District on how this overlaps with the modeling might be interesting. Dr. Bornstein discussed Dr. Rao's scheduled arrival on May 14-15, 2008 because he is planning the NATO conference.

Dr. Bedsworth reported that Dr. Rao is planning to provide a presentation on May 15, 2008; they are meeting with the full Council first and then the Executive Committee meeting afterwards to accommodate his schedule.

Chairperson Kurucz thanked Dr. Harley for his presentation. He questioned if Dr. Harley had any opinions on what areas for further study would be in getting to the synthesis of information nearing the end of the year.

Dr. Harley said in terms of prioritizing by air quality impact, forest fires is high on his list, as they could see some pretty serious situations due to eco-systems drawing out more during longer, hotter summers. He also thought more work needed to be done on the meteorological side, the frequency and severity of the high ozone events is an important question and issues of temperatures changing, and the spatial and temporal details of how temperature changes. One of the biggest uncertainties and most important questions is how anthropogenic emissions and population change will proceed over the next decades, which has a strong influence on future air quality, as well.

Also, California is now committed, by 2050, to reducing its greenhouse gases emissions to 80% below 1990 levels. Depending upon the approach of achieving this, some significant additional effects on emissions could be seen, which he has not considered in this analysis. He said he would rather see California go to electrification rather than use bio fuels or fossil fuels in the transportation system, because bio fuels when burned are not greatly superior to conventional fossil fuels in terms of local air pollutants emitted.

A brief discussion regarding expanding parks in the area, biogenics and possibly measuring the effects of emissions reductions of eucalyptus tree eradication and plantings of more redwoods by the East Bay Regional Parks Department ensued. Chairperson Kurucz stated that follow-up might be done with the Parks Department for a future presentation.

Chairperson Kurucz, on behalf of the Committee, thanked and presented Dr. Harley with Air District souvenirs in appreciation of his presentation.

5. Committee Member Comments/Other Business

Committee members, or staff, on their own initiative, or in response to questions posed by the public, asked a question for clarification, make a brief announcement or report on his or her own activities, provided a reference to staff regarding factual information, requested staff to report back at a subsequent meeting on any matter or took action to direct staff to place a matter of business on a future agenda.

Council members briefly discussed the Air and Waste Management Conference in June 2008, and would be briefed by Mary Ann Goodley, Executive Office Manager, on participation. Mr. Altshuler commented that the Air District Board could benefit from an Advisory Council perspective on EPA Certified woodstove efficiency and the renewable and low-carbon impact of wood as fuel on climate change.

In response to a question from Committee Chairperson Kurucz, Advisory Council Chairperson Bedsworth replied that the matter of wood-burning devices and wood smoke had been turned back to the Committee level, in this case, the Public Health Committee. Mr. Altshuler noted that this was not in the purview of Public Health but rather, as a matter of renewable fuel and climate change, a subject for the Technical Committee to address.

Chairperson Kurucz indicated a synthesis of information from past minutes and presentations on this topic would be appropriate, but preferred not to add future speakers to the agenda at this time. Further discussion of wood as a renewable fuel, black carbon effects on snow and synthesizing data ensued.

Jean Roggenkamp, Deputy Air Pollution Control Officer for the Air District, closed the discussion by saying that informational meetings of the Rule 6, Regulation 3 on wood smoke would be taking place shortly, and that a CEQA document addressing these kinds of issues was being prepared for that purpose.

Chairperson Kurucz noted that it would be planned to have Phil Duffy speak at the next Committee meeting, and a potential second speaker, and asked the Committee members if they would be willing to extend the meeting time an extra hour.

6. **Time and Place of Next Meeting.** 9:30 a.m., Monday, June 2, 2008, 939 Ellis Street, San Francisco, CA 94109.

7. **Adjournment.** Meeting adjourned at 11:22 a.m.

/s/ Lisa Harper
Clerk of the Boards
(for Jean Marie Mink)
Temporary Executive Secretary

AGENDA: 5B

Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109

APPROVED MINUTES

Advisory Council Public Health Committee
1:30 p.m., Wednesday, April 9, 2008

1. **Call to Order:** Chairperson Kim called the meeting to order at 1:37 p.m.

   Roll Call: Janice Kim, M.D., Ph.D., Chairperson, Cassandra Adams, Jeffrey Bramlett and Brian Zamora.

   Absent: Steven Kmucha, M.D., Karen Licavoli-Farnkopf, MPH, Linda Weiner

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

3. **Approval of Minutes of February 13, 2008:** Mr. Zamora moved approval of the minutes, seconded by Mr. Bramlett, carried unanimously.

4. **Review and Discussion of Final Draft Strategy for Asthma as it Relates to Indoor Air Quality:**

Chair Kim stated that in 2005 the Committee was asked to provide additional guidance on indoor air quality and asthma, she discussed key references and reviews by the Institute of Medicine and said the matter is complex in which pollutants can get indoors. She presented a draft document entitled, "Strategy for Asthma as it Relates to Indoor Air Quality" and clarified some of the important indoor air sources, listed various programs such as the U.S. EPA Indoor Air Program and programs of the CARB.

Chair Kim stated it would be useful for a designated staff member at the Air District to participate in quarterly meetings of the California Inter-Agency Working Group.

ACTION: Ms. Adams moved approval to accept the Strategy for Asthma as it Relates to Indoor Air Quality, seconded by Mr. Zamora; carried unanimously.

Chair Kim suggested that the item be forwarded to the Advisory Council and also asked staff to determine the dates in 2004 and 2005 of when the previous recommendations were made and recorded. Mr. Hilken said staff can research the minutes and identify those dates.

5. **Overview of the Community Air Risk Evaluation (CARE) Program**

Henry Hilken stated that Planning staff had previously reported on the program, questions have been received regarding the health risk assessment conducted in West

Oakland, and draft results show very high levels of risk from diesel particulate matter in West Oakland.

CARE Program Manager, Dr. Phil Martien, gave an overview of the program, stating that the CARE Programs focus is in communities where levels of PM are particularly high. The CARE Program looks at, not only where emissions and concentrations are high, but where sensitive populations are located in the Bay Area. Issues of dense urban development are addressed within the region and they suggest trade-offs between high density and high emissions, and preserving open space. The program is a 3-phased program and he discussed work completed to date in each phase. The Task Force has recommended including mitigation measures as the program is being developed. There are current vacancies on the Task Force and members discussed the body's composition and the need for an additional health professional.

Dr. Martien presented an emission inventory for the Bay Area region to year 2005, pie charts by pollutant and source category, individual pollutants and those broken down by source category, chronic non-cancer toxicity weighted emissions, Acrolein pollutant sources and their concentration levels. He discussed the different cancer outcomes resulting from various pollutants, maps of the emission inventory, information on demographics, and modeling in Phase II on concentrations of diesel particles.

Regarding next steps, Dr. Martien reported active participation in the West Oakland Health Risk Assessment, work on regional and sub-regional modeling, work on a truck survey and enhanced measurements in West Oakland, and said they have started to collaborate more with local health departments to present information and to hear some of their concerns.

Dr. Martien provided an update on the health risk assessment, stating that Air District staff is working with the CARB, the Port of Oakland, and Union Pacific Railroad Yard. The HRA focuses on diesel particles. It looks at cancer and other health impacts of the Bay region as a whole and the study considered 3 source regions; Part I-Maritime part of Oakland—265 tpy; Part II – Union Pacific Rail Yard-11 tpy, and Part III – Other West Oakland-568 tpy.

Mr. Zamora questioned and confirmed the report included all sources in the Bay and out past the Golden Gate, but did not include outside areas due to prevailing winds impacting the West Oakland area.

Dr. Martien presented key findings of the HRA as follows:

- The West Oakland community is exposed to diesel PM concentrations that are almost three times the estimated background diesel PM concentrations in the BAAQMD.
- The estimated lifetime potential cancer risk for residents of West Oakland from exposure to diesel PM emissions is about 1,200 excess cancers per million.
- Port operations 200 excess cancers per million
- UP Rail Yard 40 excess cancers per million
- Non-Port and non-UP sources about 950 excess cancers per million

Another key finding is that the on-road heavy-duty trucks result in the largest contribution to the overall potential cancer risks, followed by ships, harbor craft, locomotives, and cargo handling equipment and source categories were presented for Part I/Port, Part II/UP, Part III/All Other, and Combined source impacts.

Chair Kim said there is a significant cancer impact in Part III, and she questioned how much was related to freeway versus local truck traffic. Dr. Martien said they feel they have good representation of the trucks on the freeway; they are using the MTC Travel Network which represents major roadways but not minor streets and agreed it could be under-estimated. Once a detailed survey of where the trucks are traveling on the local streets, they may find it does not affect the assessment significantly. Source destination studies could be useful and they will try and differentiate between those trucks with containers involved with the Port and those that do not.

Dr. Martien presented a map of contours of risk from the Port of Oakland to the Bay Area region as a whole, discussed diesel PM emissions and non-cancer impacts.

Dr. Martien presented state regulations adopted and those which are planned to reduce risk, but noted remaining risk levels are still high at over 200 in a million, he presented the current projected risk levels and projections in 2010, 2015 and 2020, with CARB regulations and growth and said by 2015, assuming new regulations are adopted, there will be an 80% reduction in the population weighted risk and by 2020.

The Air District has been very involved in the health risk assessment, is committed to staying involved to track reductions in diesel emissions and risk in West Oakland. The Air District co-chairs and participates in the Port of Oakland's Maritime Air Quality Improvement Plan Task Force and they will update and refine emissions estimates, will conduct an enhanced measurement study, and adding monitoring stations in the West Oakland area to track progress of overall particulate reductions.

Dr. Martien described the CARE Mitigation Action Plan, which focuses on risk reduction activities where most needed, have identified six impacted communities (Concord, East Oakland/San Leandro, Eastern San Francisco, Richmond, San Jose and West Oakland) where they are working with grant funds, outreach efforts, act as liaison with local health departments and work on developing land use guidance which will help cities and counties assess health impacts to new development projects from existing sources. The Plan will also look at all five Ports and developing emission inventories and he further discussed total projected grant funding in 2008 which amounts to $87 million.

Mr. Zamora questioned whether there is an assessment of health impacts to existing people from existing sources. Dr. Martien said the land use guidance will focus on new development, but West Oakland is considering a buffer zone between industrial areas and residential areas, but the problem is that those buffer zones already include residential areas. It may be that they could address what types of mitigation measures are effective and whether they can be applied to existing situations. Also, using grant funding will be helpful as well as CARB regulations.

Mr. Bramlett applauded staff for their work, scope, accuracy and detail of the information.

Mr. Zamora referred to slide 3; Land Use Guidelines, and said it would be very important to work with the West Oakland community and Health Department and overlay those high risk populations such as schools and long term care facilities. He said long-term care facilities were never designed to have air conditioning and this would be a good example of a mitigation measure.

Chair Kim questioned whether funds would be available for those types of mitigations, said CARB has earmarked a tremendous amount of funds for certain categories and questioned the specifications for those programs in dealing with at-risk populations. She discussed an article of a study done in the American Journal Respiratory Critical Care Medicine Journal; a portable air filter was put into a residential senior home, the senior's heart rate variability was monitored, they did a trial with and without HVAC and were able to show that with the air filter on, there was a reduction in particulate matter and also a reduction in heart rate variability.

Mr. Hilken introduced Virginia Lau, Advanced Project Advisor in the Planning Division and in the CARE program.

Chair Kim also congratulated the Air District on its commitment to the project, said she attended the West Oakland Community meeting several weeks ago and commended the District on its work, as well as the Ports who discussed their commitment and work.

Mr. Hilken said they would like to increase representation on the CARE Task Force from the health field in general and asked members to pass on suggestions and potential candidates.

Ms. Adams confirmed that people other than health officials could be forwarded onto staff, as well. Dr. Kim and Mr. Zamora suggested working with the local County Health Departments to also seek potential candidates. The Committee further discussed resources on the CARE website and potential interested candidates from the state health level as a resource.

6. Committee Member Comments/Other Business

Mr. Bramlet thanked Dr. Kim for her work on the project as well as District staff.

Mr. Zamora suggested agendizing wood smoke on the next agenda and Mr. Hilken noted there were meetings scheduled in April and if not posted already, it will be very soon.

7. Time and place of next meeting: 1:30p.m., Wednesday, June 4, 2008, Room 716, 939 Ellis Street, San Francisco, CA 94109.

8. **Adjournment:** The meeting adjourned at 2:58 p.m.

/s/ Lisa Harper
Clerk of the Boards

AGENDA: 5C

Bay Area Air Quality Management District
939 Ellis Street
San Francisco, California 94109

APPROVED MINUTES

Air Quality Planning Committee
9:30 a.m., Thursday, April 10, 2008

1. **Call to Order:** Chairperson Drennen called the meeting to order at 9:45 a.m.

   Roll Call: Harold Brazil, Irvin Dawid, Robert Huang, Ph.D., Kendal Oku and Emily Drennen, Chairperson.

   Absent: Ken Blonski, William Hanna, Kraig Kurucz, and John Holtzclaw, Ph.D.

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

3. **Approval of Minutes of February 7, 2008:** Mr. Dawid moved for approval with minor edits, Mr. Brazil seconded the motion, and the minutes were approved unanimously.

4. **Bay Area High Occupancy Toll Lanes:** *Lisa Klein, Senior Transportation Planner for MTC, presented information to the Committee on MTC's High Occupancy Toll Lanes Study.*

   Ms. Klein began the presentation with HOT lane definitions, stating they were basic carpool or HOV lanes with a "twist." Carpools and buses still travel free of charge, tolls are collected electronically and variable tolling is where higher tolls are charged during peak periods and lower tolls at times where less congestion is seen.

   Ms. Klein gave background on why HOT lanes and congestion pricing were being discussed, and in particular in the context of the long-range plan update, *Transportation 2035*, noting the ambitious, quantifiable performance objectives that were set as part of plan. Most of these objectives come from state plans or legislation attempting to reverse trends for improvement of maintenance, delay reduction, particulate and carbon dioxide emissions reductions, collision reduction and improving affordability and reducing vehicle miles driven (VMT).

   She reviewed what would be needed to achieve the targets, said transportation pricing could have an effect and could be implemented quickly, and obstacles are mainly political for the most part. Focused growth is also a key component which is a longer-term measure, because it takes some time for land-use changes to take effect. She discussed the difficulty of putting peak pricing in the US transportation sector and said there has been greater success in Europe and Asia. New York City was planning to implement a cordon-pricing scheme and they failed to achieve support in the legislature to implement this. The U.S. model on congestion pricing today has mostly been HOT lanes. They are in operation in several places already around the U.S., and soon to open in quite a few more cities in the next few years, including Seattle and the Bay Area by about 2010.

Ms. Klein described first-generation HOT lanes, in Orange County, Houston and San Diego, as "chutes", with cars entering at one end, drive eight or ten miles and exiting at the other end. Every year or so the toll is increased due to demand. Ms. Klein discussed variations on the model relating to charges, types of carpools charged and the charge at full or reduced rates.

Ms. Klein then reviewed next generation HOT lanes which are considered successful, drawing attention to the Minneapolis design which differs in that it is not a chute; there are ways to get in and out in the interim points over the ten-mile distance. In terms of their benefits, they are often called "Lexus lanes", particularly in the press, but when you look at the data, they are actually used by all different income groups and occupation classes. In Orange County they have doubled "through-put". In Minneapolis, they have improved speeds and have reduced collisions. San Diego has actually had an increase in carpooling since the implementation of the HOT lanes.

Ms. Bent said MTC staff has done a technical assessment that shows a HOT lane network is feasible, it has many benefits and the Commission has been asked as to whether it should be included in the long-range plan. The Commission has not yet made a decision on the whole network and is grappling with governance related questions; however, she said HOT lanes in development in Alameda and Santa Clara County will happen and reflected in the RFP. It was suggested adopting a pricing congestion model to tackle one issue instead of two. She said MTC did a study of congestion pricing on the Bay Bridge and found it technically feasible, but failed to find a sponsor in the State legislature, whereas the Bridge District has toll setting authority itself. She believed MTC is still very interested in congestion pricing on the Bay bridges, but the question is whether the State legislature will support it. Their assessment is that the political environment is not supportive and there is a lot of sensitivity about the issue.

In response to a question by Chair Drennen regarding using revenue bond financing to speed this up, Ms. Klein replied that current legislation requires revenues to stay within the corridor for which they are generated. The track to develop the regional network requires more flexibility than this, and MTC staff would need this in order to develop the network.

In closing, Chair Drennen recapped that the reason this committee is looking at the issue is because they want to explore what should be in a transportation pricing policy for the Air District. In putting together the presentation, she asked if there are further directions or policy questions that have not been answered on some level in the Bay Area, and Ms. Bent said she would need to follow-up with Chair Drennen on the question.

5. **Overview of Road Pricing Strategies:** *Tilly Chang, Deputy Director of Planning for the San Francisco County Transportation Authority, presented an overview of the kinds of road pricing strategies currently used and proposed for use in the Bay Area, as well as some of the policy implications that should be considered with these kinds of projects.*

Ms. Chang introduced herself and co-worker, Zave Bent, San Francisco County Transportation Authority Principal Planner, who is in charge of the SFCTA's Mobility, Access, and Pricing Study. The presentation was begun by Ms. Chang offering a possible organization of a research agenda for the Committee based on questions forwarded by Chairperson Drennen, and San Francisco's own initiatives in the road-pricing realm. Ms. Chang spoke about overall objectives for road pricing and international examples:

- Internalize externalities:

    - Congestion problem—as much a land use regulation failure as anything else; something that is not a short-term problem, but a short-term tool to address a long-term policy area that is very difficult to crack. To the extent the right signals are sent out, road pricing can be an incentive for more fully-considered location decisions for households and firms.
    - Air quality impacts and Safety as a function of one's decision to drive, in terms of contributing to VMT and other issues.
- Financing method—distinguishing between cost-recovery and adjusting cost to be reflective of right costs.
- Pricing as a Transportation Demand Measure (TDM) tool, which is more an efficiency type of objective, to make better utilization of the system in place. High overlap with internalizing the externalities:
    - Congestion and VMT reduction
    - Promotion of transit—not only in terms of creating the more appropriate price differential between driving and transit and use of revenue as a policy consideration
    - Parking management—increasing costs of driving overall, at all stages of auto ownership, including the cross-subsidy potential to use parking revenues to fund transit.
    - Pricing and Equity—already a potential argument that the current status quo itself is inequitable and the burden of the regional and national high transportation costs falls more on low-income households. In New York, that argument in hard dollar terms has some appeal for low-income families, who may feel that they cannot bear the burden of the extra charge if they have few options.
- Implementation of equity policies.

Drivers of these objectives:

- Climate change imperative, and health and environmental impacts.
- Challenge in urban areas of how to expand and grow sustainably.
- Highway trust fund, which is our nation's main source of investment capital for surface transportation will be facing bankruptcy by end of fiscal year 2009 or 2010, a national crisis because gas taxes are the main source at both the national level as well as California.
- Additionally, as a tool, gas taxes have diminishing returns, as fuel economy improves.
- Federal, state and local taxes do not cover the whole cost, which points to the context for the equity debate.

Ms. Chang discussed pricing methods, citing existing pricing in U.S. and internationally, to address the objectives. She said in this case, she wants to classify what might be some of the tools in road pricing overall that fall within these categories. There is definitely overlap and she is also trying to identify where these have been seen either in operation or as proposed.

In terms of the externalities, there are HOT Lane examples domestically. Additionally, the DOT has been funding other projects through Value Pricing Program including VMT based fees, and pay-as-you-go type measures including insurance, mileage-based gas tax, and distance tolls.

She discussed the UK and London's proposed increased carbon-based registration fee on vehicles, which is over and above the congestion charge. They are proposing to exempt the charge for the lowest-emitting vehicles. This is an example of the idea of rationalizing or balancing congestion policy objective versus environmental policy objective within the same pricing policy. However, at some point the policy will need to be revisited when there is many low emitting or cleaner vehicles out there using the system.

As for methods of financing transportation as a finance method, tolls are historically very well-established in the U.S., such as axle charges. She referred to the latest case-studies out with German trucking and how they have documented its overall efficiency and non-disruption to their rail-truck market. Gas taxes also help to fund existing needs, but they have not kept pace.

Regarding pricing as a TDM tool, there is the whole gamut of parking, ownership and unbundling of rates, making them very clear and transparent. In San Francisco the price for an off-street residential parking space in new condos is approximately $100,000 when unbundled from the purchase price. There is also a 25% parking tax on commercial parking in San Francisco. San Francisco's Port Authority and MTA have implemented some versions of this and would be interested in expanding it.

Many housing developers, employers or institutions like schools or hospitals are required to implement TDM measures such as transit promotions, class-passes, and discounted transit-passes. Regarding pricing and equity, there are tools for reinvesting revenues in affordable options. For example, lifeline tolls were proposed by MTC when they did their Bay Bridge pricing study back in 1994.

Regarding employer-based programs, from the Manchester outreach, the UK is looking at creating a mechanism to help address the idea of one or two weekly discounts from employers on the congestion toll for the working low-income groups. Tackling both ownership and usage are needed because if you do only one versus the other, you are leaving something on the table. The total cost of owning and operating a vehicle and using the road-pricing as a tool needs to be bundled together at both ends.

Ms. Chang turned the presentation over to Ms. Bent, to discuss the Congestion Pricing Initiatives from the Mobility Access and Pricing's (MAPs) point of view. Ms. Bent produced slides regarding congestion pricing goals for the MAP study. The project's goals include sustainable growth in San Francisco using economy, equity and social justice concerns and environmental improvements and enhancements.

Ms. Bent defined congestion pricing as a package of improvements and not just the fee that most people are aware of and is the most controversial piece. Drivers need to see the value they are receiving. Some of the options for improvement could be reinvestment in transit services, new projects and new bus lines, increasing the frequency of service, signal timing improvements and road safety, as well as bicycle and streetscape amenities, pedestrian amenities, and whatever else that would be appropriate for San Francisco.

She said in London and Stockholm there has been an improvement in reliability between thirty and fifty percent, through improved traffic flow, road safety and vehicle emissions,

depending on whether you are in a car, or on transit. Stockholm is a much smaller program in a much smaller city than London but it has reinvested into new park-and-ride spaces and additional transit service. With regard to Rome, it was noted there was a difference in the types of vehicle emissions reductions in Rome, because they continued to exempt motorcycles and motorbikes from their congestion charge. In the case of some particular types of greenhouse gases, they saw an increase in emissions, and in others they saw a decrease.

Ms. Bent enumerated ways congestion pricing works and what the technology might look like through the use of detectors mounted to gantries or lamp posts, FastTrak responders, camera-based systems, on-street signage and education, and multiple payment methods. She reviewed international city areas and sample congestion pricing scenarios and examples of political and public acceptance of programs.

Ms. Bent then drew comparisons between San Francisco, in terms of the scale, and other cities mentioned, how well streets are performing and speeds measured. The map showed gave roads and segments operating below 10 mph on average in the afternoon or evening peak hours, as well as below 8 mph for transit, and below 30 mph on freeway segments. The map showed most of the congestion is in downtown, Civic Center and south of Market areas, which is where a lot of our businesses are located and where a lot of employment is, but it is clear that a lot of people are trying to get to the northeastern part of the city.

In looking at other statistics in the Bay Area over 9 of the last 10 years, transportation rates consistently as one of the most important problems according to the Bay Area Council. The Bay Area is the second most congested region in the nation according to the Texas Transportation Institute, and as part of the baseline analysis it is known that half of an average regional trip is spent in traffic delays. Also being tracked are economic and environmental impacts; San Francisco sacrificed 2.3 billion dollars in 2005 in terms of out-of-pocket costs from excess fuel and value of lost time sitting in traffic delays, and also the cost to commercial transportation and deliveries. In San Francisco, mobile source emissions account for 50% of equivalent CO_2, which is higher than the statewide average at 40%. The area most congested in San Francisco is the downtown Civic Center and the south of Market Street area. Half of those trips are made by cars on a daily basis. The City's transit mode-share is highest in the peak hours to and from downtown at about the mid-40% to low-40%. This is in sharp contrast to a public opinion poll done at the beginning of the study to understand how many people in the Bay Area feel that they have a transit option for their most common trip to San Francisco. 80% of respondents said they do have a transit option for their trip.

In looking at the map of travel to downtown San Francisco, significant congestion comes from trips made by people coming into San Francisco from the East Bay, North Bay and the South Bay. However, the South Bay has multiple entry points and no price control. She said that in the future, the types of development expected in the next 20 years or so necessitate proactive planning to avoid exacerbation of existing conditions. With regard to the reasons why congestion pricing is being looked at, Ms. Bent noted that the successful implementation in cities worldwide have shown there is public and political feasibility and acceptance for a program like this when it can demonstrate benefits. Also, the technology has matured to a point it is actually able to enhance the program rather hinder it.

Trends in congestion management also suggest pricing. The SFCTA has been asked to evaluate congestion pricing as part of the county-wide transportation plan and the San

Francisco Climate Action Plan. Discouraging driving is a clear category where congestion pricing would be found, but it is also a way of funding the additional categories and encouraging people to pursue the different actions in that category. Congestion pricing can encourage people to increase use of public transit, ride sharing, carpooling and bicycling, and fund improvements necessary to make them available.

She said when they look at where congestion is worse and what areas have the most options available for improvement, there are two ways they can look at congestion charging;

1) Focusing on a particular zone or area in the City, including how small a zone can be defined to begin to see how benefits might trickle to other streets or access roads to the network.

2) Focusing on the key gateways and entry points into the City and how congestion can improve by charging those gateways or key routes. Since there is no bridge coming in from the south making that the sub-area and gateway into the City is more porous than the north and east, there is no bridge coming in from the south, so they want to understand what happens in the area being evaluated, but also look at the potential diversion impacts and how they can be managed or mitigated. They will also look at the different types of improvement necessary to improve the options that people need to access their trips.

The key question for the SFCTA is whether congestion pricing is right for San Francisco. Ms. Bent reported that they know there are strong concerns, including equity – whether congestion pricing is fair in terms of income equity and geographic equity. They have found that many of the low income travelers are already on transit and are just as likely or more likely to support congestion charging than middle to higher income travelers. They also want to understand who would pay, what value they would receive, and how a program can be designed to suit their needs. They will also look at potential programs to minimize the impacts to people who do need to drive.

The other significant concern heard is whether or not San Francisco will continue to be competitive and what the business impacts will be from a congestion pricing program. To that end, the SFCTA is interested in looking at how congestion currently impacts San Francisco businesses. For example, the SFCTA has heard from businesses that they pay a higher fee for deliveries in the peak hour, and that some businesses have been forced to change their 30 minute guarantee of service within one hour because of rising congestion.

They are also looking at how other cities have fared with respect to congestion charging, how they have borne out impacts by size, location and sector and how that might impact San Francisco through economic analysis.

She presented a brief schedule of the study, stating they are currently focused on model development and analyzing the different scenarios and improvements that would be part of the package, are hoping to have recommendations by late summer/early fall of this year and expecting to hold public workshops in the summer to discuss alternatives and receive feedback prior to developing recommendations.

Tilly Chang, Deputy Director of Planning, gave a presentation of the Urban Partnership Program and selection of the Bay Area region as one of five cities to receive funding. She said they were able to secure the $159 million grant as a part of a regional effort led by the Golden Gate Bridge District. (The Bridge District's resolution on March 14th secured the grant by providing legislative authority to implement a congestion-based variable toll on the Doyle Drive and Golden Gate corridor). Doyle Drive pricing is meant to demonstrate the

DOT's 4-T's that they have linked to congestion management: Tolling, Transit, Technology, and Telecommuting.

She described the elements of the grant program including, the Doyle Drive replacement project which is in the final stages of environmental review, the SFMTA's SF Go Traffic management of the SFMTA's SF Go Traffic Management Program which also provides signal priority benefiting Muni and Golden Gate vehicles, $20 million in parking management projects to demonstrate the concept of congestion pricing in the context of parking supplies, $12 million for construction of a parking structure at the Larkspur Ferry Terminal for the Golden Gate Ferry system..

Ms. Chang answered Chair Drennen's of why Muni did not receive any grant funds by replying that San Francisco applied with MTC and other jurisdictions and the DOT only chose to fund the San Francisco part of the program. Within that program, they reached out to the Golden Gate Bridge District, Muni, DPT and others, and the Bridge District at the time was not prepared to participate in the application and opted out of the process. The pitch was then made for enhancements to the BRT corridors, and they got signal priority through the SF Go program primarily because they saw that the tolling point was primarily going to affect North Bay travelers and so the argument was that Muni would not carry the bulk of those shifted trips. After they applied, the DOT surprised everyone by including $12 million of ferry money which had not been sought as part of the original application. Then Golden Gate Bridge District decided that their basic constraint was at Larkspur in terms of access and parking, so that was their decision. Of the total program, almost half has been obligated already but others are awaiting further resolution of the Doyle Drive funding question.

She discussed the Doyle Drive facility and its need for replacement and said it rates 2 out of 100 on a federal scale without even seismic considerations that it needs. Therefore, San Francisco and the State have prioritized it as the highest rated safety project in the city and region. The project will have a total cost of about $1 billion and has a consensus design plan. Of the $1 billion, 2/3 of it has been identified, which leaves about $370 million funding gap.

In response to a question from Mr. Dawid, she confirmed that none of the congestion pricing funds could be used for funding the replacement of Doyle Drive, but it could go to any project or service funded by the Golden Gate District.

Regarding variable pricing of parking, Ms. Chang reported that many people wonder if tolling can be a substitute for congestion road pricing, but also said that she believes that you will not get necessarily the location-specific effects that one is looking for. The MTA and the Port of San Francisco have already begun piloting and are about to launch an even larger scale implementation of parking pricing.

Mr. Dawid said one thing learned from the New York, London and Doyle projects is that it is key to get political buy-in. He confirmed with Ms. Change that new state legislation or the use of existing toll authority that the Golden Gate District already had was needed to do a toll on Doyle Drive. She said it was originally felt that legislation should be pursued, with only the District serving as a back-up should it not come to fruition. Over the months, the District said they would prefer to be the toll entity and for the MTC not to seek out their independent legislation for purposes of securing the grant.

With respect to the Doyle funding problem, there would be some legislative authority needed to impose a further toll over and above what has already been decided.

Mr. Dawid said his understanding is that Washington, D.C. has the second highest level of congestion from the Texas Transportation Institute, and Aslow, Norway is included in the study.

In response to a question about what types of models were used for the congestion pricing study development, Ms. Chang said San Francisco has an activity-based travel demand model. She said it was originally only focused on San Francisco residents, and the MTC model was utilized to analyze regional traffic. As part of this study, they have expanded the San Francisco model so they now have a nine county Bay Area activity-based model which can look at regional interactions. She said for counties outside of San Francisco, they are not quite as refined as if they were in their own county model, but they are definitely not as aggregated as the MTC model.

Chair Drennen questioned in what ways the Advisory Council and Air District could be more involved or supportive to SFCTA's efforts in the future. Ms. Chang said they have four advisory councils and for agencies, they have a staff level and a policy level, and David Burch is the representative on their committee. They held two meetings already and will have another before the next round of public workshops. They have discussed how the different pricing policies and scenarios and study design will interact with existing policies of each of the different agencies. They also have a Stakeholder Advisory Committee and the Business Advisory Council that looks at citizen and advocacy issues as well.

Chair Drennen questioned if funding or staffing by the Air District could prove to be useful in the future for the project. She confirmed with Ms. Chang that there was discussion with Ms. Roggenkamp in sharing a local match, but in the end, MTC and the SFCTA were able to come up with the match together, but in the coming period, they would love to discuss partnering together in the next phase. She said the SFCTA would like the support by the Air District for any type of resolution that would come forward for either the study or the idea in context of Doyle Drive pricing. She believed the congestion link is there for both, as well as for parking. The San Francisco Municipal Transportation Agency Board will hold a hearing on April 15th to consider the variable parking proposal and any statements of support would be helpful. She said one of her comments will be to encourage them to be more specific in their policy about variable-izing price to manage demand and to also address the use of revenue.

Chair Drennen questioned if there were any policy issues that would be helpful or might be missing that the Air District could provide clarity on, such as equity, how funding is spent, revenues, and Ms. Chang said the drive toward policy is very much needed, and she believed she could discuss this with their full team and follow-up. Areas of interests include: how to evaluate emission impacts in the CEQA process, the idea of trading and monetizing greenhouse gas credits, and whether there are markets in which credits are being traded and turned into revenue streams that agencies and projects can use to fund or bond against. She said as part of the decision to purchase clean vehicles, this should be documented to indicate how it can be traded and credited, and monetizing what was part of that decision in order to go back later and say it was part of the decision-making.

Mr. Dawid confirmed that the $12 million Golden Gate Ferry enhancement for the use of a parking structure came out of the Golden Gate Bridge District and they were not part of the Urban Partnership grant application, but proposed it through a separate funding source. He confirmed it was not possible to change the $12 million. He referred to the Downtown Mobility and Pricing Study and questioned if the $1 million grant from DOT runs out at a

certain point. Ms. Bent said she believed it runs out in December, but she would need to double-check. It must be used within 3 years, and they were well within that timeframe. She said the study is intended to determine whether congestion pricing is right for San Francisco, to define the feasible scenarios and also to identify a pilot project within parking management.

Mr. Dawid questioned and confirmed that legislative authority would be needed to do any type of pricing. He confirmed that the gantry cannot be placed on Highway 101, but can be placed on the exit. He noted 52% of the people going to downtown are from within San Francisco, and he believed the non-San Franciscan people should be identified. In the New York proposal, they were going to credit anybody who paid a toll that would be subtracted and he confirmed this would be considered, but no decision has been made on this. Mr. Dawid said he would love for the study to be used as a way to get into the South Bay people because they are those that can get into San Francisco without paying any type of toll. It was stated that this argument has been made, it is part of the balancing, and trips within San Francisco are being shown as the bulk of the problem. Mr. Dawid questioned and confirmed with Ms. Chang that it could be suggested to look at a southerly cordon and identify the use of funds to invest in projects like a downtown extension to a Trans Bay Terminal, or Caltrain electrification or other refined options. But, the larger ones are being proposed and they can narrow down as the rationale gets clearer.

Chair Drennen suggested looking at the Air District and car registration fees and the taxes. She just purchased an electric car to register it and paid $6 to the Air District. She asked if the Committee would want to have the Air District work with DMV to levy car registration fees as a way of looking at this. Mr. Dawid said he is suspect of registration fees because they are fixed regardless of it producing low or high emissions. We want to encourage the turn-over of vehicles but also encourage getting rid of 1980 cars. He said he believes the Air District should tackle operational costs as well as legislation, and he discussed his experience with AB 2444 which was vetoed by the Governor last year. He also suggested learning more about AB 2744 (Huffman) which would propose a Climate Protection Fee of up to 10 cents. If it passed the legislature, it would still need to go to a vote of the people. Chair Drennen questioned the timing of the Bill, and Mr. Dawid said it was introduced this year and it may not make it this year, but possibly next year. Chair Drennen said another possibility is whether there is interest about hearing about the parking management issues and ways of tackling it. Mr. Dawid said the Committee might like to hear about what Redwood City has done with their model.

Mr. Oku agreed, and said what he has seen is a movement toward charging individual vehicular drivers which is important, but also improving mass transit, you create a usable system and nexus for people to get where they need to go and then the price will move them over to that system. Chair Drennen said it serves as a carrot to affordable and accessible public transit and agreed this could be agendized.

6. Committee Member Comments/Other Business:

Chair Drennen said the meetings have been moved to Thursdays and Dr. Holtzclaw cannot attend meetings on Thursdays. She asked that a poll be done and confirmed three Committee members noted Wednesdays were good dates for meetings.

7. **Time and Place of Next Meeting:** 9:30 a.m., June 5, 2008 – 939 Ellis Street, San Francisco, CA 94109.

8. **Adjournment.** 11 :00 a.m.

/s/Lisa Harper
Clerk of the Boards
For : Jean Marie Mink
Temporary Executive Secretary

AGENDA: 5D

Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109
(415) 749-5000

APPROVED MINUTES

Advisory Council Regular Meeting
9:00 a.m., Thursday, May 15, 2008

Call To Order

Opening Comment: Chairperson Bedsworth called the meeting to order at 9:07 a.m.

Roll Call: Louise Bedsworth, Ph.D., Chairperson, Harold Brazil, Ken Blonski, Robert Bornstein, Ph.D., Jeffrey Bramlett, Irvin Dawid, Emily Drennen, MPA, Fred Glueck, William Hanna, John Holtzclaw, Ph.D., Robert T.P. Huang, Ph.D., Kendal Oku, Linda Weiner and Brian Zamora.

Absent: Cassandra Adams, Sam Altshuler, Steven T. Kmucha, Kraig Kurucz and Karen Licavoli-Farnkopf.

Public Comment Period – There were no public comments.

Consent Calendar

1. Approval of Minutes of March 12, 2008

Council Member Dawid requested the following amendment:

- Page 9, last paragraph, amendment to the first sentence; "Mr. Dawid commented that, out of 1.2 million wood burning devices, 1.1 million are fireplaces, and…"

Committee Action: Council Member Holtzclaw moved to approve the Minutes of March 12, 2008, as amended; seconded by Council Member Zamora; carried unanimously without objection.

Committee Reports

2. Technical Committee Meeting of April 7, 2008

Chair Bedsworth reported that the Technical Committee received a presentation at its April 7, 2008 meeting on the consequences of changes in temperature, inflow boundary conditions, and local emissions on air quality in Central California by Dr. Rob Harley. She said Dr. Harley spoke on what future emissions will look like considering population growth, advancing technologies

and climate change, discussed the EPA's Community Multi-scale Air Quality Model (CMAQ) used to predict ozone and other concentrations, the Regional Climate Model which provides detailed information about California's temperature change, global warming information, range of regime, saturation of topography and future emissions and their factors. He further reviewed a summary of ozone effects in the Fresno, Sacramento and Bay Areas and projections into the year 2050, pointed out that California has committed to reducing greenhouse gas emissions to 80% below 1990 levels by the year 2050, and spoke of mitigation progress.

Council Member Bornstein said at Dr. Harley's presentation, when he pointed out the work done and he tried to reconcile Dr. Harley's results, Dr. Harley acknowledged that he used daily average temperatures which show warming, but since the ozone is sensitive to maximum temperatures which have been cooling, he acknowledged the work must be redone with a variation. And, results showing upward projections based on warming do not match what has been happening in the Bay Area.

3. Public Health Committee Meeting of April 9, 2008

Council Member Brian Zamora stated that the Committee had reviewed and discussed the Final Draft Strategy for Asthma as it Relates to Indoor Air Quality, which he said would be delayed until July 9, 2008 due to final incorporation of information. He reported that District staff gave an overview of the CARE Program, the West Oakland Health Risk Assessment, the CARE Mitigation Action Plan, and voiced the need to increase representation on the CARE Task Force. At the next Committee meeting on June 4, he hoped to see the revised text of the regulations for wood smoke in order for the Committee to make a recommendation to the Council and Board, and he confirmed with Council Member Dawid and Chair Bedsworth that the issue of the alternative resolution on wood smoke as a bio-fuel could be discussed for review at the Committee level.

4. Air Quality Planning Committee Meeting of April 10, 2008

Council Member Emily Drennen stated the Committee received two presentations; Lisa Klein from MTC presented information on MTC's High Occupancy Toll Lanes Study and an overview of road pricing strategies currently used and proposed for the Bay Area, and their policy implications were presented by Tilly Chang of the San Francisco Transportation Authority. She said the Committee did not adjourn to a date certain next month; however, she believed the next meeting would occur on the third Monday of the month if this was amenable to Council Members' schedules.

5. Presentation on Multi-scale and Multi-pollutant Modeling Research and Its Applications to Address Human Health and Ecosystem Issues. *Dr. Rao, Director, Atmospheric Modeling Division, National Exposure Research Laboratory, U.S. Environmental Protection Agency, provided an overview of the Community Multi-scale Air Quality (CMAQ) modeling system and discussed its applications with regard to the effects of climate change on air quality and the relationships between air quality and human/ecosystem health.*

Dr. Rao first introduced Dr. Sten who serves as Chair of the Scientific Committee on Air Pollution Modeling.

Dr. Sten reported he was in town perusing available facilities to hold an Air Conference this time next year in San Francisco; that scientists from NATO countries from all over the world would come and present information on air pollution modeling, its application to the region, air pollution and health, as well as a special session on the California 2000 Field Study. They are delighted to be holding the conference in San Francisco and anticipate its success.

Dr. Rao thanked Council Member Bornstein and others for their coordination in scheduling the presentation. He discussed health impacts of poor air quality, stating that the EPA estimates that in the year 2010, meeting air quality standards would:

- Prevent 23,000 Americans from dying prematurely;
- Avert over 1,700,000 incidences of asthma attacks and aggravation of chronic asthma;
- 67,000 incidences of chronic and acute bronchitis;
- 91,000 occurrences of shortness of breath;
- 4,100,000 lost work days, and 31,000,000 days in which Americans would have had to restrict activity due to air pollution related illness; and
- 22,000 respiratory-related hospital admissions would be averted, as well as 42,000 cardiovascular hospital admissions and 4,800 emergency room visits for asthma.

Dr. Rao said additional impacts of poor air quality result in visibility impairment, acidic deposition, eutrophication of coastal areas, crop damage, and air toxics such as mercury which is estimated to reduce the U.S.'s productivity of fish by $8.7 billion per year.

He discussed the Clean Air Interstate Rule (CAIR) and its effect on NOx emissions, future air quality management challenges, the Atmospheric Modeling Division's (AMD) strategy to meet user needs, linking emission sources to ecosystem and human exposure, and sound science for environmental decisions. He stated managing air quality requires modeling tools that connect among various scales and he presented global, regional, local and personal examples.

Dr. Rao discussed air quality research framework in understanding atmospheric processes and predicting changes in air quality through observation and modeling, to transitioning research to applications, making scientific-based air quality management decisions, refining decisions and strategies and then evaluating program effectiveness. He presented the CMAQ "One-Atmosphere" modeling system and framework, CMAQ users world-wide, the application of evaluating the interactions of climate change and air quality, future climate simulations which suggest extension of the ozone season, and the influence of aerosols on the radiative balance of the Earth-Atmosphere system. He said in most of the eastern United States, ozone is a summertime problem in September, but this problem would be extended based on projections.

Dr. Rao said they are developing an WRF-CMAQ Coupled Modeling System which allows interactions between met and chemistry, said nitrogen deposition is an important contributor to coastal eutrophication, and discussed said the CMAQ applications linking airsheds and watersheds for ecosystem analysis.

Regarding regional air quality, the NOx SIP call has dramatically reduced emissions in the eastern United States. He presented graphs of CMAQ sensitivity to emissions and meteorological changes, HYSPLIT back-trajectories during the 1998 ozone season and reductions in daily max

8-hour ozone to wind trajectories from the Ohio River Valley, and impact of NOx SIP call, stating emissions have been reduced and greater improvement in air quality has been simulated and demonstrated. However, more study is needed to understand how exposures change, their connection and how they lead to hospital admissions. He described sources and partnerships for better characterizing air quality such as the EPA for monitoring, NOAA for modeling, NASA for satellite and the Department of Agriculture for wildfires.

Dr. Rao discussed characteristics and uses for Environmental Public Health Tracking (EPHT) data which detects unusual trends, populations at risk, develops information for better clinical care and individual health action and facilitates policy development. He further discussed the PHASE Project's objective and scope as developing and evaluating alternative air quality characterization methods for EPHT, with an overall goal of producing information that can be routinely used to track potential relationships between public health and air quality. Multiple scales are important in linking urban air quality to exposure and he discussed modeling tools available and a case study in New Haven, Connecticut relating to locations of emission sources, roads and census block group centroids. He presented modeled annual average benzene concentrations, micro-scale hot spots like roadways and said new findings on roadway pollution which indicates that about 60 million people live within 200 meters from roadways.

In summary, air quality in the United States has improved since the inception of the Clean Air Act; however, the NAAQS for 8-hour ozone and fine particles continues to exceed in some parts of the country. A better understanding of the interactions of climate change and air quality is needed, and improved air quality models are needed to address near-roadway pollution and population exposure to harmful levels of toxic air contaminants.

Council Member Weiner referred to the PM 25 standards in 2020 and he confirmed with Dr. Rao that this takes into account federal rules but not control policies from SIPS, but aggressive programs would be undertaken at the State level.

Council Member Weiner further confirmed that Dr. Rao's reference to the influence of air cells and cooling effect takes into account government climate change results; however, aerosol interactions have not gone into the models because of the way the model is used. Current conditions are modeled and then the impact is reviewed as to whether or not the change in emissions is sufficient. If it is, this is the strategy that gets put in the SIBs. Dr. Rao said it may not be the same year round, so it is arguable that a multi- or decade-type situation is needed to better understand these interactions and have confidence in pollution policy plans.

Council Member Bornstein referred to mercury and questioned if the EPA has determined that local power plants in the east are the source, or was it more of a regional problem. Dr. Rao said studies were done in terms of quantifying the internal transport which is substantial and clearly the power plant location will have nearby impacts, but the overall source was a global problem. He believed the problem would most likely be handled differently under the new Administration.

Council Member Glueck questioned whether there is a way to gauge increases and monitor levels of emissions based on percentages of populations for land use planning purposes in order to balance higher densities. Dr. Rao believed that often times the future is based upon estimates;

designing a policy today to be implemented in the next 10 years would better serve as a baseline from which to track emissions and determine whether increase or decrease is due to population change economic activities, VMP or other reasons.

Council Member Blonski referred to worldwide model users, believed there is a fair amount of modeling in China and Asian, and questioned to what degree the scientific community was working together between the United States and China. Dr. Rao said while communications could be better, he acknowledged China and India's exponential growth, said there are many who visit the United States from China and vice versa each year where discussion and interaction occurs, and there are some US/China bilateral agreements in place; however, China is unwilling to share some of their data and they do not have the same rigor in terms of modeling and collection of observation as does the United States.

Council Member Huang requested Dr. Rao discuss the intercontinental transport and its impact in California. Dr. Rao said transport was recognized as a problem 10 years ago. Data has shown that controls are working towards reducing emissions, but that growth is unable to be offset. He said there is a multi-national working group and LRTAP is bringing together modeling tools to simulate transport and in 2010. A study will take place in California that specifically will look at what the influx of pollutants will be and this is why worldwide models are needed.

Council Member Holtzclaw questioned the control of emissions in China and India, and Dr. Rao said there is an EPA Central Control Board in India, some of the more significant changes are being dictated by the courts and not by the Pollution Control Board, and air quality has improved significant from 10 years ago. He discussed India's use of lead free gasoline, three-wheeler conversions to CNG, and agreed the population is concerned.

Chair Bedsworth confirmed India was starting to move in the direction of planning for integrating models. The National Academy of Sciences came out with a report asking their agency to start imposing multi-strategies, but how one puts together a SIP is an issue.

David Mobley said EPA is trying to implement the policies and are moving toward multi-pollutant and multi-media control.

Jean Roggenkamp, Deputy Air Pollution Control Officer, asked if there has been a pilot program of analytical tools for a control strategy in assessing the benefits of a multi-strategy for pollutants. Dr. Rao said the state of New York is trying to investigate how one would implement this and they are anxious to learn about it. Ms. Roggenkamp was pleased to hear of the interest at the national level, and believed both the analytical tools and policy instruments used are important to serve the public.

Chair Bedsworth, on behalf of the Advisory Council, thanked Dr. Rao for his presentation and presented him with Air District momentums.

Air District Overview

6. Report of the Executive Officer/APCO

Acting on behalf of the Executive Officer/APCO, Jeffrey McKay, Deputy APCO, said the Budget and Finance Committee reviewed and recommended the Air District's Budget to the full Board of Directors. While significant grant funding has been received to date, he said the Budget maintains prudency with no increases in staffing, except for the addition of a contract Health Officer.

He further reported community meetings had been completed on the Wood Smoke Rule and full adoption should occur in July by the Board of Directors.

Regarding climate protection, Mr. McKay said the Executive Officer is moderating a panel at the Climate Action Registry Conference in San Diego, California. The Air District is pursuing work with local governments to assist them in their inventory requirements, and next Wednesday the Board will be considering adoption of a new fee rule which includes a greenhouse gases fee.

Mr. McKay reported the CARE program is moving ahead and seeks to identify health risks in six communities. The West Oakland Health Risk Assessment is relevant to the topic, it is hard to overstate the importance of the on-road truck rules and the effects of diesel, and the Air District targets dollars in these areas. He said the Green Ports Initiatives are also moving forward. The Executive Officer met with the Port of Oakland yesterday, the Air District is hoping to meet their plan goals and is assisting the Planning Commission in creating their inventory.

Council Member Holtzclaw thanked the Air District for bringing forth a Spare the Air Day along with a Bike to Work Day, and congratulated staff for working on an agreement relating to insurance and bicycle safety, a model of which may be replicated around the region. Mr. McKay acknowledged concerns relating to infrastructure for employees to utilize bicycles to work and credited the Human Resources Manager for moving forward on addressing the issue.

Council Member Dawid questioned why the Air District held a Spare the Air Day prior to the ozone season's start and questioned the historical background of Spare the Air Day. Ms. Roggenkamp reported that due to unpredictable weather, Spare the Air Day has been held outside of that period and due to higher standards, it could get to the point where there are unhealthy days for everyone. In such cases, the Air District makes that announcement.

Chair Bedsworth referred to the one free transit day in June and questioned whether this came forth as a result of a budget decision. Ms. Roggenkamp replied there are limited dollars for any kind of transit incentive program due to reductions in TFCA dollars and other grant funding. The decision was made to have two days this summer. However, as the standards changed, they modified the program to address the situation and the decision was made to have one free day of transit which may or may not be held on a Spare the Air Day. She said the Air District will use money set aside for additional incentives and education, focusing on the climate and sparing the air.

Council Member Dawid questioned whether the episodic focus of the Day had been abandoned as a result and Ms. Roggenkamp responded, stating the free transit will not be associated with an episode. The Air District realized there is not enough money to provide free transit on Spare the

Air Days but hopes the actions taken by the public will continue to contribute toward reducing pollutant loads.

Council Member Hanna referred to a newspaper article relating to gas prices which has increased transit ridership. He believed BART was already at their parking and ridership limits, questioned whether those impacts would reduce users on Spare the Air Days and suggested coordination be made with other transit agencies to increase their collection of the concentrated ridership. Ms. Roggenkamp said the Air District has a dialogue with transit operators. She agreed the increase is a challenge; however, people in the Bay Area are motivated and the Air District can assist in helping agencies talk to each other about ways of accommodating given increased ridership.

Council Member Weiner requested a brief update on the Green Points Initiative, and Ms. Roggenkamp said the Port of Oakland, ARB and the Air District have worked on an inventory of emissions and activities, there are other ports in the region that have not gone through that activity and the Air District is working with those agencies, which included Benicia, San Francisco, Redwood City and Richmond.

Council Member Holtzclaw said he was on the Advisory Public Media Group when Spare the Air day began and the thought behind it was to get people used to identifying other ways of using transportation and trying those alternatives on Spare the Air Days. He believes the Air District is making positive steps forward in asking people to find alternative ways to get to work and while it is not another free transit ride, it is a logical step forward.

Council Member Brazil questioned whether the outreach also focuses on land use decisions in addition to transportation. Ms. Roggenkamp said the Air District focuses its awareness campaign about the correlation between air quality, health and changing behaviors, acknowledged the importance of land use decision-making, and believed the area could be explored in moving forward.

Council Member Weiner said she thought the most effective public message which will have an impact are those derived from the intended audiences or users, and she asked that the Air District look at this more closely when formulating social marketing campaigns.

Air District Overview:

6. **Report of the Executive Officer/APCO:** None

Other Business:

7. **Council Member Comments/Other Business**

Council Member Drennen announced that the California Supreme Court had just ruled in favor of same-sex marriage, on a vote of 4-3.

Council Member Dawid announced the Board of Directors would hold a public hearing on May 21, 2008 to consider adoption of proposed amendments to District Regulation 3: Fees and

approval of filing of a Notice of Exemption from the CEQA. He believed this would be one of the most important regulations of the Air District.

Council Member Weiner thanked Air District staff for providing her with media exposure in the San Francisco Chronicle and San Francisco Examiner, who both covered Spare the Air Day activities.

Council Member Holtzclaw thanked staff for providing the PowerPoint presentation in color, stating it was much easier to follow.

8. **Time and Place of Next Meeting:** Council Members will be polled for the next meeting date, to be held at 939 Ellis Street, San Francisco, CA 94109.

9. **Adjournment:** The meeting adjourned at 10:44 a.m.

/s/ Lisa Harper
Lisa Harper
Clerk of the Boards

AGENDA: 5E

Bay Area Air Quality Management District
939 Ellis Street
San Francisco, California 94109
(415) 749-5000

APPROVED MINUTES

Advisory Council Executive Committee
Immediately Following the Regular Advisory Council Meeting
Thursday, May 15, 2008

1. **Call to Order – Roll Call:** Chairperson Louise Bedsworth, Ph.D., called the meeting to order at 10:58 a.m.

   Present: Louise Bedsworth, Ph.D., Chairperson, Jeffery Bramlett, Harold Brazil, Emily Drennen, and Kraig Kurucz,

   Absent: Kraig Kurucz

   Also Present: Fred Glueck

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

3. **Approval of Minutes of March 12, 2008:**

   Mr. Brazil requested amendment to the spelling of Ray Kon's name on the first page of the minutes.

   Committee Action: Ms. Drennen moved approval of the minutes as amended; seconded by Mr. Bramlett; the minutes carried unanimously.

4. **Standing Committee Chair Reports:**

   A) Technical Committee Meeting of April 7, 2008

Chair Bedsworth gave the report on behalf of Committee member Kurucz, stating at the April 7, 2008 meeting the Committee received a presentation on the consequences of changes in temperature, inflow boundary conditions, and local emissions on air quality in Central California by Dr. Rob Harley. She said Dr. Harley spoke on what future emissions will look like considering population growth, advancing technologies and climate change, discussed the EPA's Community Multi-scale Air Quality Model (CMAQ) used to predict ozone and other pollutant concentrations, the Regional Climate Model which provides detailed information about California's temperature change, global warming information, the range of regime, saturation of

topography and future emissions and their factors. He further reviewed a summary of ozone effects in the Fresno, Sacramento and Bay Areas and projections into the year 2050, pointed out that California has committed to reducing greenhouse gas emissions to 80% below 1990 levels by the year 2050.

B) Public Health Committee Meeting of April 9, 2008

Committee member Drennen said the meeting date will be changed and confirmed the third Monday works for almost everyone, and the next meeting would be scheduled for 9:30 a.m. on June 16, 2008.

Executive Office Manager Mary Ann Goodley said staff would be polling dates for the June 2nd Technical Advisory Committee, as well as alternative dates for the next Public Health Committee.

C) Air Quality Planning Committee Meeting of April 10, 2008

Chair Bedsworth reported that on April 10th she attended the Board of Directors Executive Committee meeting and provided an update on the Advisory Council Executive Committee's activities and work. She said there is a lot of interest on the resolution coming from the Public Health Committee on Indoor Air Quality and Asthma and said discussion was given on education of wood burning devices and indoor air quality.

Chair Bedsworth reported that at the next meeting, the Indoor Air Quality matter will come to the full Advisory Council. Mr. Glueck referred to the resolution and questioned whether the District determined that information in the resolution would be used for informational purposes or, has the Air District has determined it has or will have the ability to affect indoor air quality in the future from a regulatory standpoint.

Ms. Roggenkamp said the resolution is a step in indoor air quality and the focus of the resolution serves to assist staff in answering questions on indoor air quality and how to better coordinate with local health departments. She said in every legislative session there is information presented about ARB taking a more defined role in indoor air quality. But, at this point, the recommendation focuses on information which serves to answer questions and better coordinate with local health departments.

Committee member Bramlett agreed there are many easy things that can be done, but they take time and coordination. Mr. Glueck said he was curious about the resolution's focus, given the public's impression from wood smoke and influences the government has on private households. Ms. Roggenkamp said she believed this was an important area to concentrate efforts on because there are significant health impacts, and agreed it would take time, coordination and education.

5. Chairperson's Report

Chair Bedsworth referred to the recruitment efforts for Dr. Kim, and Ms. Goodley reported that the Personnel Committee was to meet on May 2nd, but this meeting has been rescheduled for May 30, with interviews to be conducted.

Chair Bedsworth referred to attendance of Committee members and questioned if this was something considered by the Board in making appointments. Committee members confirmed with Ms. Roggenkamp that the Board of Directors is interested in attendance records when filling vacancies on Committees.

6. Committee member Comment/Other Business:

Chair Bedsworth stated the Committee would address the indoor air quality resolution at length at the next meeting. She said the Committee discussed getting the RTP on the agenda, and Committee member Brazil suggested that a CARE update also be provided. Committee member Drennen recommended discussion of the Committee and drafting of a resolution, which she would volunteer to do, on road pricing. She said their plan of having work products was working, and the Committee believed that overall, the Board of Directors was happy with all Committees' focus and associated goals.

7. Time and Place of Next Meeting: The next meeting will be scheduled upon polling of the Committee members, to be held following the regular meeting in Conference Room 716, 939 Ellis Street, San Francisco, CA 94109.

8. Adjournment: The meeting adjourned at 11:12 a.m.

/s/ Lisa Harper
Clerk of the Boards

AGENDA: 5F

Bay Area Air Quality Management District
939 Ellis Street
San Francisco, California 94109

APPROVED MINUTES

Advisory Council Technical Committee
9:30 a.m., Monday, June 9, 2008

1. **Call to Order – Roll Call.** Chairperson, Kraig Kurucz called the meeting to order at 9:52 a.m.

   Present: Sam Altshuler, P.E., Fred Glueck, John Holtzclaw, Ph.D., Kraig Kurucz, Chairperson.

   Absent: Louise Bedsworth, Ph.D., Robert Bornstein, Ph.D.

2. **Public Comment Period.** There were no public comments.

3. **Approval of Minutes of April 7, 2008:** Member Altshuler requested minor editing to pages 3 and 6 and to correct the spelling from Bart "Kruse" to "Bart Croes".

   Committee Action: Member Glueck moved approval of the minutes as amended, seconded by Member Holtzclaw; carried unanimously without objection.

4. **Past and Future Temperature World-Wide, in California, and the Bay Area:** *Dr. Philip B. Duffy of the Lawrence Livermore National Laboratory, will provide a presentation on historical temperature trends, possible causes, projected future temperature trends and their uncertainties.*

   Dr. Philip Duffy, Lawrence Livermore National Laboratory, provided a technical PowerPoint presentation, that he hopes the Committee finds informative. His purpose is to inform the Committee of some issues and hopes to provide a better understanding of what we know and do not know, but said it is not definitive or prescriptive.

   Regarding temperature trends that affect air quality in the Bay Area, Dr. Duffy said while we know a lot about temperature trends, the questions the Air District is asking are challenging, as the San Francisco Bay Area region is very small for global models. They usually deal with much larger scales, things get complex on small scales, and what really impacts air quality is daytime temperature trends in the summer, which is exactly what they do not understand.

   Dr. Duffy provided his background, stating he is a physicist by training, has worked on climate research issues since 1990, he mostly does numerical computer modeling of climate, recently he focused on climate change in California past and future and societal impacts. Therefore, he considers himself to be a generalist as compared to many scientists. He serves

as Director of a University of California Institute to study climate change impacts on air quality, agriculture and human health.

Dr. Duffy presented an outline of historical temperature trends globally, in California and in the Bay Area, covering the cause of the trends, a discussion of uncertainties and a summary, including thoughts for future research. He said temperature trends show a gradual cooling until the start of the industrial revolution and then a rapid warming which we now believe is due to increased greenhouse gases which are the result of combustion of fossil fuels. We do think that at least some of this warming is not of natural origin because of the high rate of warming during the 20th century compared to warming during previous centuries. Another reason is that computer models cannot explain the rapid warming at the end of the 20th century without including natural and human factors.

He presented an observed temperature trend (red line) going back to the before the start of the 20th century, and another trend (gray line) which is a family of computer simulations which do not include human influences and includes natural factors, but do not explain the rapid warming at the end of the 20th century. Similarly, the final panel is red and observed and the gray is computer simulation, including only human factors, but not some of the so-called natural forces, specifically solar variability and volcanos. Here, we can explain the warming at the end of the 20th century but not at the beginning. And the final panel shows the red curve is observed warming, the grey is computer simulations including both human influences and so-called natural forces. So the message is that, to fully explain the temperature history of the 20th century, we need to invoke both natural variability, natural forcings and also human influences. Because of analysis like this and others, we have increasing confidence that humans are changing climate on a global scale, and he presented three successive ICC reports dated 1995, 2001, and 2007 on climate change with quotations expressing increasing confidence that at least some of the warming seen, particularly in the latter half of the 20th century is not of natural origin.

Regarding temperature trends in California, Dr. Duffy presented temperature trends over 50 years from 1950-2000, which identifies summer and winter and the daily average of the daytime maximum temperatures which occur during the daytime and the bottom row is nighttime minimum temperatures over 24 hour cycles. The panel results are from different observational data sets which are nominally equivalent. They are in rough, but not perfect agreement. In looking separately at summer and winter, and separately at night and day, there are very different temperature trends. Gray regions have no statistically significant temperature trend. If you compare each there is more warming in winter and if you compare the bottom row to the top row, there is more warming at night than in the daytime. The summer daytime trend shows no warming. This is the time and season that has most impact on air quality, but here they really do not see a trend. We think we understand that, but they are not completely sure. The Bay Area has similar temperature trends to the rest of the State. And, the State has similar trends to the western US region.

Dr. Duffy said the observation of warming we see with thermometers is corroborated by related observations. He presented 50-year trends in snow water equivalent, which is a measure of snow on the ground. Red circles show decreasing snow trends over 50 years, which is a consequence of warming. The message from this is that many of the regions with less snow have no significant trend in precipitation and the loss of snow is presumably due to warming.

The other thing they see which confirms the existence of warming is that if you look at the rivers that drain the west side of Sierra where we get our water supply from, the flow is coming earlier in the year, which is consistent with warming which is consistent with more precipitation coming in the form of rain rather than snow, and it is consistent with snow melt happening earlier in the year.

Regarding detection and attribution, just because we see a trend, it isn't always due to humans. He presented Antarctica trends, said a year ago he looked at California temperature trends and questioned whether we think these are likely to be natural or human influences. They looked at observed rates of change of temperature and compared them to model simulations of the most rapid change in temperature likely due to natural factors. The results show a positive trend in nighttime temperatures that is warming over 50 years, an estimate of the most rapid trend which they believe is due to natural variability, and some non-natural factor must be contributing to this warming. They estimated the maximum warming possible due to natural variability by using model simulations, taking very long simulations and divided them into 50 year sections and looked at the simulated trend over time, developed a histogram of simulated trends due to natural factors only and they looked at the largest possible trend, which provided an estimate of a maximum rate of warming due to natural variability. They did this analysis for all seasons individually and for day and night and what is shown is more warming at night than in the daytime, there is more warming in winter than in spring and in summer daytime there is essentially no warming. They believe that in winter and spring, some of the warming trends are too rapid to be entirely natural.

Dr. Duffy reiterated that the Bay Area seems to share similar trends with the State of California. He looked at some of the station data and looked at nighttime/daytime, summer/winter trends, and they look similar to the data sections, which is there is generally more warming in winter and generally more warming at night.

Regarding what they believe is causing the trends, Dr. Duffy said the sort of climate models that are normally used to predict climate really do not reproduce what has happened historically in California. And this gets back to his point of that the Air District is asking him to look for what is a very small region. Climate models today are considered to have validity on the scale of continents and sub-continental scales even when looking at the scale of the entire State of California. He presented a slide detailing observations that the models do not reproduce observed historical temperature trends on the scale of the state of California.

Dr. Duffy presented and discussed the multi-observational data sets and nighttime, daytime, summer and winter trends, stating the models do predict some warming in the summer daytime. The key question is what is going on with daytime summer temperatures is historically, climate models do not reproduce what has already happened, which is a little disconcerting, but there are reasons for this.

The course-scale global models do not include a lot of the drivers or forcing factors that effect regional scale climate. Some of those are land use change, which includes irrigation and urbanization. In California, irrigation is a very significant driver of regional climate and actually a cooling influence. The other factor that is a cooling is aerosols. Their effects are not well understood and not represented in the global scale models, and agricultural aerosols are not represented at all in the Central Valley. The other factor not in the model is the snow

albedo feedback, which is an amplifying effect on warming wherein the loss of snow itself creates warming, and in the course-scale models, there is no snow. So, we know that course-scale global climate models do not include a lot of the factors and influence that influence regional scale climate, and the models are very, very course and they do not really adequately resolve the regional scale climate processes.

Dr. Duffy presented an observational study done by Drs. Bonfils and Lobell, said they looked at historical observations of temperature in California and they clearly showed for the first time that irrigation has had a significant influence on climate in California. The influence is a cooling in daytime in summer. This is part of the explanation of why, in looking on a statewide basis, we do not see any warming in summer in daytime; due to aerosols and irrigation. Irrigation exerts a cooling influence because if you wet the surface, there is more evaporation and that causes cooling. And this effect is strongest in the daytime and in summer due to irrigation. He presented model simulations that show irrigation can have a significant local cooling influence, temperature change due to a simplified representation of irrigation in a climate model, the August mean temperature, which shows keeping a surface wet locally cools the surface by degrees, which is a lot.

The other factor which he believes has a cooling influence on summer and daytime is the increased sea breeze, which is a consequence of global warming because it results from more rapid warming in the inland than coastal regions and is a consequence of the system being out of equilibrium or in a warming transition phase. The mechanism is when the temperature gradient increases, the sea breeze should increase and he said there is some evidence in the observations that this is happening. One of the things about this is that it is hard to imagine how this driver of climate will evolve as climate change proceeds.

Dr. Duffy said the other issue that needs more attention and something that will help us understand better is looking at other regions and reviewing those temperature trends. There is less warming in daytime, irrigation, aerosols and increased sea breeze are a cooling influence during the day. If there were an increase in low cloud it would be a cooling influence during the day and a warming influence at night. He said there was a paper which looked at the four days after 9-11 when there was no commercial air travel, and researchers saw a significant change in the observed temperature range during those four days which documents an influence of aircraft contrails on regional scale climate.

Regarding why there is more warming in winter and spring, Dr. Duffy said the reasons are similar—there probably is in reality a snow albedo feedback which amplifies wintertime warming. Interesting is that even though there is more snow loss in winter, the mechanism is increased through reflection of sunlight, so it is stronger in spring because there is more sunlight. Irrigation, sea breeze and aerosols are summer influences, and these mechanisms will tend to act preferentially in summer and in daytime.

Regarding the future, Dr. Duffy said he thinks the 21st century will be simpler than the 20th century was. He presented a schematic representation of the effects of different forcings on California temperatures including CO2, aerosols, irrigation, and sea breeze for the 20th and 21st centuries. He believed the warming influences should get stronger and the cooling influences should get weaker. Greenhouse gases are clearly going to accumulate in the atmosphere and will become the dominant influence on climate; however, they are not right now. He said urbanization clearly is going to get stronger, aerosols are going to get weaker

as air quality improves, he thinks there is no avoiding the conclusion that irrigation is also going to be weaker as a climate influence because we are not going to be able to use as much water in the Central Valley as historically done, the amount of agriculture land will decrease and there will be water scarcity and irrigation will be practiced in a manner that uses less water.

Dr. Duffy presented predicted statewide trends and predicted temperature changes, stating there are 45 curves which represent 3 emission scenarios (scenarios for emissions of GHGs), they are based on different rates of population growth, economic growth, the use of coal, nuclear, etc. Half of the spread is due to the different scenarios and for half of any given scenario, the models do not agree because none of them are perfect. Also on the same scale, he presented the observed historical warming for California. The message is that, although there is a lot of uncertainty in future warming, even at the low end of the range it will be much more than we have already seen according to the models.

The other issue for air quality is temperature extremes which have many societal implications, such as air quality, human health impacts, implications on energy demand and he presented information from a study done for the Energy Commission. The picture in the slide illustrates a projected increase in temperature extremes on a statewide basis, showing the maximum one-hour temperature during each year, which increases very rapidly. He said though, looking at temperature over one hour is probably not the best measure of extreme temperatures. However, the mean temperatures in California are going to increase much more rapidly than they already have and temperature extremes will also increase, which has significant impacts on air quality particularly ozone.

In parting, Dr. Duffy said historical winter and spring warming in California seems to be too rapid to be entirely natural. In local regions like the Bay area, multiple factors have influenced temperatures. Irrigation, aerosols, increased sea breeze have probably slowed summer daytime warming in California, winter warming seems to be more rapid than can be explained by greenhouse gasses alone, and the 21st century may be less complicated than the 20th century was, and it will be warmer.

Dr. Duffy said what is needed and useful would be to look one at a time at the effects of these different factors that influence climate, such as doing careful simulations just of the effects of irrigation on climate, just on aerosol, just on greenhouse gasses, just urbanization, and what it will do is allow them to characterize the climate signatures that affect climate. Once we know what these should look like, then we can look for it in the observational record. Also what will help us understand what is going on in California is looking at neighboring regions. Also, when making future projections, we have used either very course models that include both the ocean and the atmosphere or fine resolution models that actually do not include an interactive ocean, and this is significant for the Bay Area because there are issues like the increase sea breeze effect, upwelling on the coast, which has not yet been adequately modeled.

Member Glueck questioned that, with all of the influences in the Bay Area, why are not some of the local studies being compared to areas outside the Bay Area. Dr. Duffy said the temperature records exist throughout most of the country, just by doing the comparison part one could learn a lot, but if the measurements have not been made, it's too late to do that.

But just by doing the comparison part, we could learn a lot, and it does not require great resources to complete.

Member Glueck questioned whether or not reversals would be as dramatic if there were dramatic social or land use changes or reductions in the use of fossil fuels. Dr. Duffy said increases are dramatic if you compare them to the level of natural variability, but they have not been dramatic in the sense of having very noticeable impact. Globally, over the 20th century, temperatures warmed about one degree Fahrenheit, which is not noticeable. Regarding whether it would have dramatic societal impact, it would not; however, there might be impact in the future. Regarding whether or not we could reverse the impact, in principle, yes, but the problem is that the climate change we experience is the consequence of the sum total of global greenhouse gas emissions. So, if California or the entire United States cleans up its act, unless the rest of the world does, it does not help much. It does require cooperative action to address the problem. All of the scenarios, however, point to accelerated warming even assuming fairly significant action is taken on a global scale to reduce emissions.

Member Glueck questioned how much could we isolate out one particular region, and Dr. Duffy said you cannot; the climate change is the result of a sum total of global greenhouse gas emissions and this is why it is a tough problem. We can lead by example and we can prepare, and he believes California is doing a great job with both those things.

Member Altshuler said another way to say this is that pollution is very democratic. Dr. Duffy said this particular form of pollution is. The consequences of emitting are predominantly local, so if we dump mercury in our waters, it will not affect people in China.

Member Altshuler referred to irrigation, and said he can see temperatures on his front car bumper and when he drives through the Central Valley, he wondered if it was more of a crops issue than of irrigation. Driving through areas with grapes drops measurably by 3-4 degrees, but in grassland or dry areas, the temperature remains high. Dr. Duffy said his observation is probably correct; probably the reason for this is evaporative transportation. Crops are great at pulling water out of the ground and causing it to evaporate, which is the same mechanism whereby irrigation affects cooling. He said the study shown was very specific on comparing temperature trends and regions by degree of irrigation, and the more heavily irrigated the region is, the cooler the region. But he said he did not think irrigation is causing much in the Bay Area because we are not downwind from the Central Valley and we do not have a lot of irrigation here.

Member Altshuler discussed the temperature change and dryness in Blackhawk. Dr. Duffy agreed there was also much more traffic in Blackhawk and said the other thing he can sense is nighttime warming. He discussed his experiences of not cooling down at night like it used to and an example of the July 2006 heat wave.

Member Altshuler questioned if Dr. Duffy looked at the 1991 volcanic eruption, and Dr. Duffy said volcanic eruptions have a very significant, although short-lived, influence and they are factored into the models.

Member Altshuler referred to the drought situation, and he questioned if having less water to irrigate would cause more of a sea breeze, and Dr. Duffy said yes, the Central Valley would most likely warm up.

Member Holtzclaw questioned what Dr. Duffy was conceptually including for urbanization, given the number of factors such as the urban heat island, more concrete, less plants, more or less irrigation in suburban areas, more or less driving per capita, and ABAG compact modeling. Dr. Duffy said specifically as to what is in the models, he cannot provide a good answer because the simulations he does are global scale and he has never included urbanization. Speculatively, the two effects that are significant are a change in the surface color. Urban regions are darker, which is a warming influence, and the other factor is reduced evaporation; urban surfaces tend to be pavement and moisture from the soil cannot get through the pavement. More subtle effects like local emissions of heat from consumption of electricity are not in the simulation. He said there are a lot of activities in cities that directly creates heat and driving cars and running air conditioning is just two of them.

Member Holtzclaw referred to sea breezes, said there was an editorial writer who has since retired from the Chronicle and who wrote on weather 30-40 years ago. He explained the curious weather in the Bay Area as a 1 to 5 mile patch of colder sea waters right along the coast because of cooler deep currents that surface when they run into the continent. So the hot air with 60%-70% humidity hits that and it goes up as it cools up and this translates to our fog. So, part of global warming in some models might look at the ocean currents which may influence us here. Dr. Duffy agreed with this and said they refer to this as upwelling. The reason the water is notoriously cold off San Francisco is the upwelling of deeper, colder water to the surface and one of the things that drives the upwelling is the strong sea breeze, and the two things reinforce one another. Useful would be to simulate all of this with a model that includes both the ocean and atmosphere to model that phenomenon and this has not been done here. He said the fine resolution models used do not have interactive ocean and cannot simulate these feedbacks between the ocean and atmosphere which, for the Bay area, are significant. So, the questions being asked are exactly the ones they are least capable of answering.

Chair Kurucz referred to a previous data slide, stating there was not a trend in the daily summer maximum and questioned that as a whole, was there no trend or was there a slight cooling shown from this. Dr. Duffy said the gray regions have no statistically significant trends. The middle one is mostly gray, the right shows more cooling than anything else and he said his statement was to average the three pictures by eye, and it adds up to not much cooling. Also, there are other observational data sets besides these three and he just happened to use these three. He said he did not think cooling was likely to continue with the exception of sea breeze, which is hard to speculate how it will evolve. He believes the particulate and irrigation influences will get weaker, the greenhouse gas influences and urbanization will get stronger, but he is uncomfortable making this statement because it is not based on historical information, it is speculative, and only his opinion.

Chair Kurucz referred to contrails and asked if they are a strong correlation or factor, and Dr. Duffy said he did not believe it was a particularly strong factor. Chair Kurucz asked if it was in anyway an equilibrium with the fact that we often here that air travel is one of the biggest footprints that many of us have? Dr. Duffy said he did not know the answer.

Member Holtzclaw said intuitively, he would think that the CO2 and other emissions that tend to increase temperature have much more momentum than aerosols which tend to dissolve a few hours later. Dr. Duffy said this is exactly right and one way to think of it is CO2 basically accumulates in the atmosphere, it has a long lifetime and the concentration is the sum total. Aerosols have short lifetimes and this is exactly why in the 20th century the climatic influence of greenhouse gases and aerosols are similar in magnitude. As time passes, this will change because we are reducing aerosols.

Chair Kurucz questioned whether what we see as a visible contrail was from the combustion of fuel creating water or was it decompression off of the wings, and Dr. Duffy said he believes it was from the combustion of fuels, but he was not absolutely sure.

Chair Kurucz, on behalf of the entire Committee, thanked Dr. Duffy for his presentation and presented him with Air District momentums.

5. Committee Member Comments/Other Business.

Member Altshuler said it was getting harder to dispose of fluorescent light bulbs; mercury is a pollutant and asked that the collection and/or recycling of CFL's be addressed legislatively.

Chair Kurucz reminded members that the next meeting would be held on August 4 at 9:30 a.m. Member Holtzclaw requested the October meeting be held on October 13th if possible or later in the week.

6. Time and Place of Next Meeting. 9:30 a.m., Monday, August 4, 2008, 939 Ellis Street, San Francisco, CA 94109.

7. Adjournment. 11:00 a.m.

Lisa Harper
Clerk of the Boards

AGENDA: 5G

Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109

DRAFT MINUTES

Advisory Council Public Health Committee
1:30 p.m., Monday, June 9, 2008

1. **Call to Order:** Chairperson Zamora called the meeting to order at 1:37 p.m.

   Roll Call: Brian Zamora, Chairperson, Jeffrey Bramlett, Steven Kmucha, M.D., Karen Licavoli-Farnkopf, MPH and Linda Weiner

   Absent: Cassandra Adams

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

3. **Approval of Minutes of April 9, 2008:** Mr. Kmucha moved approval of the minutes, seconded by Mr. Bramlett, carried unanimously without objection.

4. **Discussion of Proposed Regulation 6, Rule 3: Wood-Burning Devices:** *The Committee discussed and received a status report on the proposed Regulation 6, Rule 3: Wood-Burning Devices. A public hearing on the rule is scheduled for July 9, 2008.*

Kelly Wee, Director of Compliance and Enforcement, said the Committee has been instrumental in working on wood smoke particulate matter issues and the Air District has worked to put forth a model ordinance to cities and counties which dovetails into the SB 656 PM implementation schedule. He discussed extensive public outreach efforts and said all comments were taken into account in modifying the Rule. When the effort began, over 16 jurisdictions that had some level of wood control program rules in effect were reviewed; however, the Air District is in the lead in addressing such a large metropolitan area.

Mr. Wee further discussed the Rule's mandatory curtailment which applies to all solid fuel devices, said the Rule has exemptions for people whose only source of residential space heating is a wood-burning device, the Rule requires cleaner burning technology in new construction and remodels and applies to EPA-certified wood stoves and inserts or pellet stoves. He provided examples of inefficient and wet wood burning, limiting burning of garbage, plastics, chemically-treated wood or other inappropriate fuels and said the Rule also requires anybody selling wood to ensure it is dry, less than 20% moisture content and properly labeled.

Mr. Wee discussed the Air District's coordinated approach of its Incentives and Outreach Department, stating the Rule affects approximately 1.2 million Bay Area residents who have fireplaces. He said on any given night 126,000 to 130,000 people could be burning in their

fireplaces, and described winter days which have exceeded the national ambient air quality standards for PM 2.5.

Committee member Weiner requested a summary of incentives and enforcement. Mr. Wee said the Air District ran a two-phase incentives program this winter; the first phase kicked off in January for $100,000 and was very successful, with an 80% to 90% conversion to natural gas. The second phase ran later in the spring at $400,000 through a voucher system, and that program is still active as people are installing devices to date. Mr. Wee discussed public education, stating that most people would comply with the Rule once adopted and he briefly discussed outreach efforts of the Air District.

Regarding enforcement, there are inspectors throughout the 9 Bay Area counties. Regulations take inspectors into single family homes for demolition renovation, open backyard burning which has been outlawed, and other residential enforcement. Additional overtime monies have been budgeted and they initially intend to issue warning letters and then move onto Notice of Violations and penalties.

Committee Member Weiner questioned the timeframe for those having an exemption for sole source. Mr. Wee said residents would not be forced to install a heater and the exemption has no timeframe for conversions.

Committee Member Bramlett discussed a case where neighbors were publicized for their burning habits which affected a child next door with asthma, and he confirmed with Mr. Wee this complaint was heard at many of the public meetings and the Rule would provide a mechanism to address such health impacts.

Committee Member Kmucha requested the source of statistical information, and Mr. Wee said statistics were derived from ABAG and census data. He said each year the Air District conducts a random survey on patterns of burning, information reveals that about half of the 2.5 million Bay Area residents have fireplaces or wood burning devices and approximately 126,000 to 130,000 people burn on any given night which varies throughout the winter.

Committee Member Weiner confirmed that stoves are certified under the EPA's new source performance standards for wood burning devices; anything from 1992 or newer should be EPA certified. She questioned and confirmed that Air District staff normally works through landlords and not tenants and that the Rule is to be considered by the Board of Directors at their regular meeting on July 9, 2008.

Chairman Zamora thanked Mr. Wee for his presentation and appreciated the significant progress made.

Committee Action: Ms. Licavoli-Farnkopf moved to support the proposed Regulation 6, Rule 3: Wood-Burning Devices to the Advisory Council; seconded by Ms. Weiner, carried unanimously without objection.

Committee member Weiner confirmed with Chairman Zamora that he would alert Advisory Council Chairperson Bedsworth to attend the next full Advisory Council meeting to provide the recommendation of support.

5. Committee Member Comments/Other Business

Clerk of the Boards Lisa Harper announced that the Personnel Committee, at their May 30th meeting, recommended the appointment of Virginia Smyly to replace the Public Health member vacancy left by Dr. Kim and that she would hopefully be sworn in prior to the next Advisory Council meeting.

6. Time and place of next meeting: 1:30 p.m., Thursday, August 13, 2008, Board Room, 939 Ellis Street, San Francisco, CA 94109.

7. Adjournment: The meeting adjourned at 2:02 p.m.

/s/ Lisa Harper
Clerk of the Boards

AGENDA: 5H

Bay Area Air Quality Management District
939 Ellis Street
San Francisco, California 94109

APPROVED MINUTES

Air Quality Planning Committee
9:30 a.m., Monday, June 16, 2008

1. **Call to Order:** Chairperson Drennen called the meeting to order at 9:30 a.m.

   Roll Call: Harold Brazil, Ken Blonski, Irvin Dawid, William Hanna, Robert Huang, Ph.D., John Holtzclaw, Ph.D., Kendal Oku, and Emily Drennen, Chairperson.

   Absent: Kraig Kurucz

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

3. **Approval of Minutes of April 10, 2008:** Mr. Blonski moved for approval of the minutes, Mr. Holtzclaw seconded the motion, and the minutes were approved unanimously.

4. **Current State and Future Projections of Regional Transit Funding:** *Theresa Rommell, Senior Planner/Analyst from Metropolitan Transportation Commission (MTC) and staff from San Francisco Metropolitan Transportation Authority (SFMTA) provided the Committee with a presentation on transit funding.*

Sonali Bose, CFO, San Francisco Metropolitan Transportation Authority (SFMTA) provided the Committee with a presentation, stating that a revenue panel was convened by the Mayor to study ways to fund Muni and review a zonal fare. As part of the study, MTA evaluated three scenarios if the entire system were fare-free; 18%, 48% and 78% increases in ridership. They reviewed the cities of Austin and Denver's fare free systems, a ridership model, high peak data from bus and rail lines, the numbers of additional hours, vehicles, facilities and drivers needed. She provided statistics, scenarios and costs for each of the three scenarios which revealed that the MTA would need to add security to the system, enhance facilities and infrastructure, update their central control system and provide other upgrades.

Ms. Bose said that the MTA has responsibilities for everything on the street--parking, signals, bicycles, pedestrians, transit and soon it will add oversight of taxis. It will look at targeting parking garage rates for long-term parking and move short-term parking to the streets, tie parking to occupancy, and increase meter rates. They are also reviewing alternatives methods to pay for parking and making available parking information available through PDA's, targeted signage, and the Internet. She further discussed Muni's structural deficit of $150 million and said a draft report is being finalized on ways to fund Muni.

Ms. Bose discussed possibilities for increased funding including additional general fund contributions, new revenues, increases in parking tax funds, the implementation of additional advertising. She also reported that the Regional Zone project for the Transit Consortium was reviewed on June 11th and the report showed there was not enough increased ridership to pursue the project.

Chair Drennen questioned what current revenues come into the MTA from the Air District and asked if there were any other relationships between transit agencies and Air Districts. Ms. Bose said because the

Air District's requirements are specific and their transit projects are so large, they typically use the $4-$5 million in grant funds from the Air District to go toward smaller bicycle and pedestrian projects.

Committee Member Dawid questioned relationship between the TA and the MTA, felt that funding various projects like streetscape and pedestrian improvements could be a major source of revenue for MTA, and believed the Portland and Seattle models would be very successful. Ms. Bose discussed roles of the TA and MTA, planning oversight, how the half cent sales tax measure is allocated through the City of San Francisco to fund projects, user and non-user group funding structures, and said until MTA builds up its infrastructure, and that even fare-free transit only in the downtown would be constrained and require additional study.

Committee Member Holtzclaw said he was intrigued with the idea of combining fare free downtown with congestion pricing of the same area, which would probably handle most of the concerns about homelessness on transit. He questioned fares in parking garages which he believed were low, and Ms. Bose said they believe garages were very high and meters were low on streets. MTA wants to encourage getting shoppers onto the streets and longer-term drivers into garages. They will look at pricing and are experimenting with sensors in the ground, pricing, technology and demand.

Committee Member Blonski referred to a start-up private green transit bus system which has been following Muni routes, noting that it incorporates a fleet of vehicles at one of the piers and questioned to what degree the private sector was being asked to provide solutions. Ms. Bose said the revenue panel looked at privatizing fare collection but politically, she believed it would be very difficult to implement, given the impact on operators.

Chair Drennen, on behalf of the Air Quality Planning Committee, expressed thanks to Ms. Bose for her presentation.

Theresa Rommell, Senior Planner/Analyst from Metropolitan Transportation Commission (MTC) distributed a handout of revenue sources for their regional transportation plan and a statistical summary on transit ridership, operating costs, revenues, and performance measures. She discussed and provided definitions of revenue source categories. She also reported that the MTC estimates there will be a total of $221 billion available for transportation over the next 25 years; however, of that amount $191 billion has already been committed and trade-off discussions are being held regarding the allocation of the remaining $30 billion.

Committee Member Holtzclaw acknowledged that MTC receives complaints when presenting information publicly because committed funds are based on decisions made for the half cent sales tax. However, when people are given a list of all projects, they are not given alternatives and many are concerned with calling those committed funds and then not reassessing the entire picture under the global warming scenario. Ms. Rommell agreed and said often, when a half-cent sales tax measure is passed there is already an expenditure plan tied to it, but MTC does not have any discretion of what is held in those expenditure plans. And, to re-evaluate what is in those plans would take some sort of voter initiative.

Committee Member Holtzclaw questioned if MTC was looking at an alternative that is more transit and smart growth-oriented and one that addresses global warming and the need to reduce vehicle miles traveled. Ms. Rommell said they have been formulating different scenarios that go toward fulfilling different priorities and this will be part of the trade-off discussions in upcoming months. She said there is also talk of HOT lane revenue and how those can go toward regional priorities.

Committee Member Holtzclaw said another place for advocacy is TEA-4 (successor to ISTEA and the two following surface transportation acts) which will be renewed next year, given a new administration that recognizes global warming. Ms. Rommell agreed and discussed her recent visit to Washington where

discussion occurred on how to affect transportation specifically with the re-authorization, and she believed a better streamlined funding process was needed by the federal government.

Ms. Rommell referred to the statistical summary on page 4; Region-Wide Transit Systems and said fare box accounts for 20% in total regional revenues. The rest come from TDA, STA, federal transit grants, county sales tax, and other grant funding which she said could be found on various city transit agency websites. She distributed the "ABCs of MTC" booklet and agreed to return in the future with additional information, as requested.

Chair Drennen questioned how the Air District currently fits into the funding picture for transit regionally, and Ms. Rommell said approximately $300 million over a 25-year period is derived from AB 434 funds, most of which are used by individual jurisdictions and transit agencies. She was not aware of other jurisdictions where Air Districts provided funding for transit.

Committee Member Dawid said some would argue that transit eats up three-quarters of both regional and local transportation budgets, and Ms. Rommell agreed and said approximately 60% goes toward supporting transit to fund capital. One of their goals at MTC is to make transit more efficient, less expensive and a course for achieving this might be to consolidate some of the smaller transit agencies in the region.

Committee Member Holtzclaw believed this did not compare the total cost of the system, as there are many subsidies to driving such as parking, health care, insurance and congestion costs. He believed there should be a multiplier effect and lumping together all costs into the same category if comparing cars to transit.

Committee Member Brazil referred to Page 9 of the Statistical Summary and questioned if there were any performance threshold requirements for transit operators. Ms. Rommell said fare box recovery is one requirement for operators to receive funding. Some requirements vary and those who do not meet the requirement are allowed to go through a performance improvement process in order to allow them an opportunity for correction.

Chair Drennen referred to increased fares, cuts in service and the need for balanced budgets, and questioned what model was used by operators given constrained budget conditions. Ms. Rommell said for the RTP on the capital side, in order to replace buses and ensure a well-run system, they have identified a deficit of $21 billion over the next 25 years. Therefore, when vehicles need replacement there will not be sufficient funding. On the operating side, it is not quite as dire but there are projected deficits over the 25 year period of about $4-5 billion.

She said opportunities arise such as the spill-over funding operators received which was significant in 2006/07; however, most of this went towards filling the prior deficit. Now with the State's budget cuts to transit funding, operators are right back where they were so there will constantly be deficits where fares or services will be affected.

Chair Drennen questioned options other than a gas tax, and Ms. Rommell said the gas tax would provide about $3 billion over a 10-year period which would be the most significant, but a secondary tax could be another bridge toll. She said there is a lot of controversy over the expansion of HOT lanes because where the revenues are generated may not be where they should be spent, and MTC estimates getting over $5 billion net over a 25 year period for HOT lanes.

Chair Drennen, on behalf of the Air Quality Planning Committee, thanked Ms. Rommell for her presentation.

5. **Discussion of Air District Fees from Vehicle Registration:** *The Committee received a presentation on Air District fees from vehicle registration.*

David Wiley, Supervising Environmental Planner, provided a presentation and information on motor vehicle registration fees received by the Air District from surcharges. Two sources which are dictated by legislation include $4 for AB 434; Transportation Fund for Clean Air, and $2 for AB 923; the Mobile Source Incentive Fund.

Regarding AB 434, Transportation Fund for Clean Air projects eligible under law include:

- Purchase or lease of clean air vehicles;
- Vehicle-based projects, i.e., retrofits and repowers of heavy-duty diesel vehicles, alternative fuels, and advanced technology demonstrations;
- Shuttle and feeder bus service to train stations;
- Ridesharing programs to encourage carpool and transit use;
- Arterial management improvements;
- Smart growth;
- Transit information systems;
- Bicycle facility improvements;
- Demonstrations in telecommuting and congestion pricing;
- Smoking vehicle program;
- Vehicle buy-back programs.

Regarding AB 923, Mobile Source Incentive Fund, projects eligible under law include:

- Engine-based projects eligible under the Carl Moyer Program;
- Certain agricultural source projects;
- Purchase of school buses;
- Accelerated vehicle retirement or repair program.

Committee Members confirmed with Mr. Wiley that the $4 fee brings in $25 million annually and 40% is sent directly to the Congestion Management Association and spent on various expenditure plan categories. The $2 fee brings in $12 million annually and 60% of this is administered by the Air District which goes into matching funds, the Vehicle Retrofit Program, the Carl Moyer Program, the Smoking Vehicle Program and other programs.

Committee Member Dawid said Chair Drennen was referring to a statewide registration fee as opposed to a surcharge which would be best addressed on a statewide level as opposed to locally being added on. He noted that the State of Washington has a weight-based, tiered registration fee whereas California's fee is based on the value of the vehicle, and there is also a flat registration fee for about $30-$40 which the State charges. He referred to the AB 923 funds and said Los Angeles is using a remote sensing device for high-emitting vehicles as they enter freeways. Mr. Wiley said the Air District has no current plans to implement remote sensing devices, agreed it was being reviewed in the south coast heavily and is a significant technology investment.

Committee Member Dawid confirmed that in the last fiscal year, $800,000 went toward funding the Smoking Vehicle Program, $4-5 million went toward funding the Vehicle Buyback Program, and that the two programs account for one-quarter of the total $25.5 million for the TFCA.

Committee Member Holtzclaw felt the two programs were formed when the Air District was only concerned about smog and particulates, and he said he thinks Mr. Dawid's argument pertained well to the usual criteria pollutant health concerns much more so than to global warming gases.

Committee Member Brazil referred to TFCA process and the bus retrofit program, said some transit operators were having problems getting monies due to the stringent reporting requirements and do not apply for funding. Mr. Wiley and Ms. Roggenkamp acknowledged the situation and indicated the Air District could try to make the process more streamlined but could not be relieved of its responsibility and accountability of the funds.

Chair Drennen questioned how the mobile source incentive fund came about and if something similar were to be done to address global warming, what would the process look like. Ms. Roggenkamp said it was a standard legislative process and it can be formulated by legislators, the COA or the industry. Chair Drennen confirmed that the $6 fee was statewide and each District Board must pass a resolution that allows the DMV to sequester the local funds; some are strongly supported by industry groups who see that reducing emissions is the goal and one way to do this is impose a tax on the source.

Committee Member Blonski referred to the TFCA funds and said the East Bay Regional Parks District has many heavy duty diesel vehicles which are extremely difficult to maintain, given retrofit requirements. He questioned if there was a monitoring component to address the impact or efficacy of the retrofit program's efficiency. Mr. Wiley said he has heard of similar concerns of the need for vehicles to build up to a certain temperature in order for the catalysts to operate and if not logged ahead of time, the devices will collect the PM and backup. However, a large majority of them operate well and achieve reductions. Ms. Roggenkamp acknowledged that the issue was being discussed, manufacturers are alerted when difficulties arise and technology is advancing which will address problems with new devices.

Committee Member Blonski reported that the Burlington Northern/Santa Fe Railroad has an entire series of new, efficient locomotives and Mr. Bunger discussed the development and testing of the new engines by Union Pacific and said ideas are evolving that seek to improve railroad efficiencies and operations.

Committee Member Dawid further discussed smog abatement fees and AB 118 funds, an added statewide surcharge which is an index gas tax based on the retail price or a flat registration fee. From the Committee's perspective it may be beneficial to look at a vehicle registration surcharge as opposed to looking at the actual registration itself, strictly regional or statewide.

Chair Drennen summarized the discussion, stating the Committee heard presentations on HOT lanes, and that there seemed to be some policy issues that have not been addressed on a regional level, including how money is raised and spent as well as equity issues. She further summarized that the Committee has interest in developing policy recommendations on this topic that would eventually go to the Advisory Council and then onto the Board of Directors.

Chair Drennen further summarized that the Committee heard about some of the difficulties the SFMTA have experienced with their transit funding, and how the Air District receives transportation monies from the region. She questioned if there was interest in moving forward to marrying those two--increased regional transit funding from Air District-led fees or other measures such as vehicle license fees or surcharges.

Committee Member Dawid said he believed AB 434 funds are very low, and said that vehicle buy-back is the largest percentage of the registration surcharge and also the most effective measure. He felt monies were best being used the way they are—in trying to clean up existing roads. He also thought HOT lanes present a great potential for funding public transit and there is a real nexus; however, his only concern is that the Air District is not an advisory body to a transit agency.

Chair Drennen said that she sees one potential committee work product which would be an Air District policy on HOT lanes and congestion pricing. She questioned if there was interest pursing an additional work product to find more funds that could be spent on transit. Committee Member Holtzclaw said he would be supportive of looking at a policy statement coming from the Committee to support congestion

pricing, including how the Air District could fund projects and where that money would be spent. Committee Member Blonski suggested first identifying the pros, cons and benefits of such a policy, but voiced support for such a policy.

The Committee voiced interest in reviewing a policy statement to support congestion pricing, and Chair Drennen suggested a presentation be scheduled for the next meeting in August relating to transportation pricing and HOT lanes, that the Committee receive more clarity on types of HOT lanes and congestion pricing projects, how they increase and decrease air quality and how the Air District would determine funding for such projects.

6. **Committee Member Comments/Other Business -** None

7. **Time and Place of Next Meeting:** 9:30 a.m., August 11, 2008 – 939 Ellis Street, San Francisco, CA 94109.

Chair Drennen confirmed with Committee members that the second Monday of the month was the preferred meeting date, and the next meeting would be held on August 11, 2008.

Committee Members discussed the proposed High Speed Rail Initiative on the November ballot, supported review of information on pollution or CO_2 emissions per passenger mile for rail or air and recommended evaluating the High Speed Rail Initiative in order to arrive at a recommendation for the Advisory Council in September, prior to the November election. They also recommended that the August agenda include the crafting of a HOT lanes and Congestion Pricing policy statement, and Committee members Holtzclaw, Hanna and Blonski agreed to meet as an Ad Hoc Committee to draft a resolution on the High Speed Rail Initiative to be agendized for review and recommendation to the full Advisory Council at their September 10, 2008 meeting.

8. **Adjournment:** 11:48 a.m.

/S/ Lisa Harper
Clerk of the Boards

AGENDA: 5I

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Jerry Hill and
Members of the Executive Committee

From: Louise Wells Bedsworth, PhD
Advisory Council Chairperson.

Date: September 10, 2008

Re: Consideration of Advisory Council Recommended Principles Developed in Response to Comments to the California Air Resources Board on AB 32 Climate Change Draft Scoping Plan

RECOMMENDED ACTION

Recommend Board of Directors approval and forwarding of Principles, to the California Air Resources Board (CARB) in response to its request for comments on the AB32 Draft Climate Change Scoping Plan.

BACKGROUND

At the August 11, 2008 meeting of the Air Quality Planning Committee, the Committee developed recommended principles regarding AB32 Climate Change Draft Scoping Plan developed by the California Air Resources Board as part of the Air District's overall response to comments on the draft plan.

The Advisory Council at its September 10, 2008 meeting discussed and further refined the recommended principles for review and approval by the Executive Committee and the Board of Directors.

DISCUSSION

The principles focus on the role of land use and transportation planning in reducing greenhouse gas emissions to 1990 levels by 2020, a mandate of AB 32. Transportation is the largest single source of greenhouse gas emissions. The Advisory Council's recommended principles address transportation and land use.

Therefore, the Advisory Council recommends that the following principles be recommended to the Board of Directors, as part of their overall response to comments on the California Air Resources Board's Draft AB 32 Scoping Plan. The principles are not listed in order of priority.

1. Climate protection actions can and should reinforce current efforts to reduce criteria and toxic air contaminants and not increase hotspots in communities heavily impacted by multipollutants. Other benefits include lower heating and

cooling costs, reduced water use and improvements in energy efficiency and public health.

2. Given that the transportation sector contributes approximately 40% of all global warming emissions in California, the Scoping Plan needs to include more aggressive emission reduction targets for land use and transportation. The plan should encourage efficient, non-auto dependent growth and compact development close to resources, jobs and transit;

3. By taking a strong leadership role now, California will realize compounded and co-occurring benefits from future land use and transportation planning undertaken now. Actions not taken will cost all Californians more in the future. Early action credit should be given as an incentive.;

4. Given that bus and train ridership is at an all-time high in California and that transit agencies are chronically underfunded, the Scoping Plan needs to address crucial transit investments and promote transportation efficiency to give Californians better transportation options, including biking and walking;

5. The California Air Resources Board (CARB) should set firm targets for regions but authorize regions and localities to choose from a flexible set of policy tools to achieve the targets. Greenhouse gas emission reduction targets for transportation and land use need to be set using a transparent, justifiable methodology. Once set, progress should be measured by a similar process and reviewed in regular intervals in order for it to be consistent over the years;

6. The Air District supports the adoption of a series of key policy tools currently under consideration, including the Indirect Source Rule, Pay-As-You Drive Insurance, Congestion Pricing and incentive programs. Other innovative measures could include alternative parking management practices (e.g. the “SFPark Program), speed reduction measures and new carbon fees to assist and reward jurisdictions successful in meeting planned targets;

7. The plan should make it a top priority to invest in and sustain public transportation and programs to improve transportation efficiency, such as increased coordination between transportation providers to improve transit linkages, and reduce congestion. In many cases, the state, regions, and local agencies could redirect funds they are already going to spend. For instance, the statewide plan should encourage metropolitan planning organizations to re-examine committed funds in their long-term transportation plans, such as those for freeway expansion;

8. Cities, counties and regions should be given incentives to develop in less fire-prone areas, manage vegetation and conserve forests and agriculture in order to sequester carbon and improve air quality.

Respectfully submitted,

Dr. Louise Bedsworth,
Chairperson, Advisory Council

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Jerry Hill and Members of the Executive Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: September 22, 2008

Re: Joint Policy Committee Update

RECOMMENDED ACTION:

Receive and file.

DISCUSSION

At the September 29, 2008, meeting of the Executive Committee, Ted Droettboom will provide an update on the activities of the Joint Policy Committee.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Jerry Hill and Members of the Executive Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: September 19, 2008

Re: Discussion and Possible Recommendations on Advisory Council's Role

RECOMMENDED ACTION

None at this time. Item is for a conceptual discussion.

BACKGROUND

Since 1955, the California Health and Safety Code has mandated that the air pollution control agency for the Bay Area maintain an Advisory Council, the purpose of which is to advise and consult with the Board of Directors and Air Pollution Control Officer regarding issues related to carrying out the statutory mission of regulating sources of air pollution within the Bay Area. As presently codified, this requirement, contained in California Health and Safety Code Sections 40260, et seq. mandates that the Bay Area Air Quality Management District (Air District) maintain an Advisory Council that consists of 20 members who preferably are skilled and experienced in the field of air pollution. Pursuant to section 40262, the membership of the Council is defined to include the Chairperson of Air District Board of Directors, who serves as an ex officio member, at least three representatives of public health agencies, at least four representatives of private organizations active in conservation or protection of the environment within the district, and at least one representative of colleges or universities within the state. In addition, the membership of the Council must include at least one representative of each of the following groups within the district: regional park district, park and recreation commissions or equivalent agencies of any city, public mass transportation system, agriculture, industry, community planning, transportation, registered professional engineers, general contractors, architects, and organized labor. Each member of the Advisory Council serves a two year term of office. Advisory Council members serve without compensation, but are allowed actual expenses incurred in carrying out their duties. The California Health and Safety Code stipulates that the Advisory Council must meet at least four (4) times per year.

DISCUSSION

As noted above, the statutory purpose of the Advisory Council is to advise and consult with the Board of Directors and Air Pollution Control Officer regarding issues related to carrying out the statutory mission of regulating sources of air pollution within the Bay Area. The purpose and the role of the Advisory Council have been different at different

times in the Air District's 53 year history. In the early years, for example, the Advisory Council wrote some of the District's first rules. In more recent years, as the District has employed professional staff to research and develop rules, the Advisory Council's role has evolved to one of reviewing current developments in a variety of air pollution related areas and offering advice and counsel to the Board of Directors and District staff on those issues.

Over the years, the Advisory Council has created a set of standing committees of itself (Executive, Planning, Technical and Public Health), through which it conducts its reviews of various issues. The committees are typically composed of nine or fewer Advisory Council members (less than a quorum of the Advisory Council as a whole). The committees periodically report and make recommendations to the Advisory Council meeting as a whole, which then takes actions on the reports and recommendations. Often the information reviewed by these committees overlaps with interests of one or more of the other committees and/or the Advisory Council as a whole, which has sometimes lead to duplicative meetings or cumbersome joint committee meetings.

Staff has been for some time considering ways in which the talents and resources of the Advisory Council might be more fully and efficiently utilized. Staff will discuss some concepts in this regard with the Executive Committee and seek direction from the Executive Committee on these concepts. Among the topics of discussion will be transitioning from the current Advisory Council committee structure to having the Advisory Council meet as a whole at four meetings per year each of which would include presentations and consideration of a specific topic. The topics for these four meetings would be: (1) current developments in health information related to air quality; (2) current developments in technologies and techniques for control of air emissions from stationary sources; (3) current developments in technologies and techniques for control of air emissions from mobile sources; and (4) current developments related to air quality in land use planning and transportation planning. By considering these topics in meetings of the full Advisory Council, staff believes the talents, expertise and views of the various members of the Advisory Council can be more fully and efficiently shared to the benefit of the Board of Directors and staff of the Air District.

BUDGET CONSIDERATION/FINANCIAL IMPACT

Staff anticipates that a reduction in the number of meetings and synthesizing of topics considered by the Advisory Council would result in an undetermined savings from reduced demand on staff resources devoted to the Advisory Council.

Respectfully Submitted,

Jack P. Broadbent
Executive Officer/APCO

AGENDA: 8

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Jerry Hill and Members of the Executive Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: September 19, 2008

Re: Discussion of Air District Out-of-State Business Travel Policy

BACKGROUND

Pursuant to the direction received at the Board of Directors meeting held on July 9, 2008 and at the request of Director Uilkema, this item has been placed on the Executive Committee agenda for discussion.

Attached for the Committee's review is a copy of the Air District's Administrative Code Division II- Fiscal Policies and Procedures; Section 5: Allowable Expenses – Section 5.4 (b).

Respectfully Submitted,

Jack P. Broadbent
Executive Officer/APCO

SECTION 5 ALLOWABLE EXPENSES

5.1 DIRECTOR TRAVEL EXPENSES.

The Board of Directors shall be reimbursed for actual and necessary expenses, including meals, incurred by them in the performance of their duties, and for travel incurred by them in the performance of their duties, and for travel expenses outside of the District when authorized by the Board of Directors or the Chairperson of the Board in cases where short notice prevented authorization by the full Board. Directors shall be reimbursed for mileage at the rate per mile allowed by the Internal Revenue Service each year. Mileage shall be allowed to Directors for meetings of the Board of Directors and for committee meetings from their homes to the office of the District or to such other place as the meeting of the Directors or the committee, or other official business, may be held. Necessary incidental expenses shall include all reasonable charges for bridge tolls and for parking.

5.2 DIRECTOR PER DIEM MEAL EXPENSES.

The Board of Directors is authorized to include meals in their expenses, when such expenses occur as a result of attendance at Board, committee or other authorized functions and provided that receipts are presented as required by Section II-5.6.

5.3 INCIDENTAL EXPENSES OF DIRECTORS AND APCO.

Actual and necessary incidental expenses in attendance at other meetings or on direction of the Board or Chairperson of the Board, or in conference on District business with qualified persons, shall be allowed to the Board of Directors and the APCO.

5.4 EMPLOYEE EXPENSES.

Employees shall be reimbursed for actual and necessary expenses, including meals, incurred by them in the performance of their duties provided that receipts are presented as required by Section II-5.6.

(a) Employees shall be reimbursed for mileage at the rate per mile allowed by the Internal Revenue Service each year, plus necessary bridge tolls and parking charges. Mileage will ordinarily be computed from the District, except when an employee leaves from a location nearer the destination.

(b) Travel of employees outside the District area on official business shall be at the direction of the APCO or his designee and with prior specific approval. The APCO shall approve out-of-state travel only after determining that there is no acceptable, lower cost alternative to the travel. Travel outside of-the state must be reported to the Board of Directors at the next regularly scheduled meeting.

(c) Employees attending meetings, hearings, or conferences with qualified persons at the direction of the APCO in an official capacity will be allowed actual and necessary incidental expenses incurred in connection with such attendance, and shall submit travel requests on appropriate forms.

5.5 TRAVEL REPORTS.

Upon request by the APCO or supervisor, it shall be the duty of any assistant, deputy or employee whose duty it has been made to attend a conference or meeting outside of the District to file a reasonably complete report with the APCO.

5.6 RECEIPTS FOR EXPENSES.

Vouchers or receipts shall be presented to the Director of Administrative Services for all necessary and incidental expenses, provided, however, that vouchers need not be presented for bridge tolls, parking charges, telephone calls, meals and other miscellaneous travel and

incidental expenses, the individual items of which do not exceed ten dollars ($10.00), provided further, that at the discretion of the APCO, employees of the District may be required to present such receipts or vouchers for amounts less than ten dollars ($10.00) for purposes of internal control.

5.7 **TRAVEL EXPENSE ADVANCES.**

Advance payment for travel expenses may be authorized by the APCO to cover expenses which will be incurred by District personnel on approved travel. Such payments may include costs of transportation and other anticipated major expenses.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Hill and Members of the Executive Committee

From: Jack Broadbent
Executive Officer/APCO

Date: September 22, 2008

Re: Options to Address Accrued, Unfunded OPEB Liability

RECOMMENDATION

Consider options to address accrued, unfunded liability for other-than-pension post-employment benefits (OPEB) and provide feedback to staff in advance of any recommendation to the Budget & Finance Committee.

BACKGROUND

Accounting rules for government agencies require that the District reports financial liabilities from certain retirement benefits known as "other-than-pension post-employment benefits," or OPEB for short. Staff has worked with an actuarial consulting firm, Bartel Associates, to identify the District's financial liability for retiree benefits including medical, dental, vision and life insurance.

Staff has worked with the Executive and Budget & Finance Committees over the past two years to review the District's OPEB liability and explore funding approaches. So far, the following steps have been taken relative to funding the District's OPEB liability:

1) $1.4 million per year ($4.2 million total so far) has been approved to pre-fund *future* OPEB liability. Options for addressing the unfunded OPEB liability that had already accrued[†] were to be developed for subsequent consideration.
2) The District has selected CalPERS to administer an OPEB trust fund and the Board of Directors approved an agreement with CalPERS to that end.
3) The money approved for pre-funding the future liability has been sent to CalPERS.

DISCUSSION

Staff has developed options for addressing the unfunded accrued actuarial liability, also known as the UAAL, which represents the liability that had built up prior to the District's decision to begin pre-funding the OPEB. The options are as follows:

1. Issue Bonds

Preliminary meetings with bond consultants indicate that the District could issue bonds at a borrowing cost of around 6%. This compares favorably with the assumed rate of return on

[†] $48 million if you assume a 4.5% discount rate, $31 million if you assume a 7.75% discount rate

funds invested by CalPERS, which is 7.75%. CalPERS has achieved a high rate of return historically, exceeding their actuarial assumption on average the past fifteen years. The difference between the borrowing cost and the return on investments could achieve savings in the range of $6 million to $9 million dollars[‡] depending on the amortization and debt service model used. The annual payments on the bonds would also vary depending on the model used. For example, a level debt service model with a 30 year amortization schedule would require a commitment of $2.2 million annually; this scenario assumes that the bond issue is for the entire amount of the UAAL but of course there is no requirement to issue bonds for the entire amount.

2. Increase the annual contribution to the trust fund to pay down the unfunded liability.

Using a twenty year amortization schedule, the District would need to increase the contribution to the trust fund by approximately $2.4 million dollars in the first year in order to begin paying down the accrued unfunded liability. This option would impact the budget in the short term, but would have a positive long-term impact on the District's finances by taking advantage of investment returns in the same way the District is doing with the current contributions. This option provides more flexibility than bonds, in that the funding would be reviewed and approved (or not) each budget year.

3. Maintain the current level of contributions.

Maintaining the current level of contributions would not address the accrued unfunded liability, but would also not impact the budget in the short term. Over the long term the District would forego any savings that would be realized using options 1 or 2.

SUMMARY

Staff has developed options to address the UAAL portion of the District's OPEB liability. The options vary widely relative to potential savings and budget flexibility. Staff would like feedback from the Committee before developing any recommendation for consideration by the Budget & Finance Committee.

Respectfully Submitted,

Jack Broadbent
Executive Officer/APCO

Prepared by: Michael Rich
Reviewed by: Jack Broadbent

[‡] These figures reflect present value; the range is $14 million to $30 million adjusting for inflation

AGENDA: 10

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chair Jerry Hill and Members
of the Executive Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: September 18, 2008

Re: Overview and Discussion of Air District's 2009 Clean Air Plan

RECOMMENDED ACTION

None. Informational item only.

BACKGROUND

The California Health & Safety Code requires air districts to update their plans for State air quality planning purposes on a triennial basis. The District's most recent plan, the 2005 Ozone Strategy, was adopted by the Board in January 2006.

With respect to national air quality planning requirements, the District is not required to prepare a SIP submittal for either ozone or particulate matter (PM) at this time. However, if the Bay Area is designated nonattainment for the revised national ozone or PM standards, the District may be required to prepare a PM SIP and/or an ozone SIP at a future date.

DISCUSSION

Staff has begun work on preparing the Bay Area 2009 Clean Air Plan (CAP). Staff anticipates bringing a final plan to the Board for consideration and approval in fall 2009. The primary purpose of the 2009 CAP will be to update the 2005 Ozone Strategy. In order to comply with the Health & Safety Code, the plan must:

- Report on progress in reducing ozone concentrations and public exposures
- Provide an updated control strategy, including "all feasible control measures" to attain state ozone standards by the earliest practicable date and reduce transport to neighboring air basins

In the context of updating the ozone plan, District staff is interested in developing an integrated, multi-pollutant air quality plan. As currently envisioned, the 2009 CAP would address particulate matter, air toxics, and greenhouse gases, in addition to ozone precursors.

The potential benefits of developing an integrated, multi-pollutant air quality plan include the following:

- Help to reaffirm the District's reputation as a leader and innovator
- Better integrate the District's efforts to reduce criteria pollutants, air toxics, and greenhouse gases
- Optimize synergies / minimize trade-offs among control measures and pollutants
- Provide stronger justification for potential new control measures by showing the entire range of pollutants reduced and full air quality benefit that would be achieved
- Identify control measures that will be most cost-effective in reducing overall health risks and health effects
- Provide opportunity to consider new types of control measures (e.g., heat mitigation measures) to address challenges such as global warming
- Allow the regulated community to more effectively plan for compliance via an integrated plan that includes control measures to address multiple pollutants
- Educate the public and stakeholder groups as to 1) relationships and interactions between different pollutants and precursors, and 2) the potential impacts of climate change on criteria pollutants and air toxics.

Developing an integrated, multi-pollutant plan presents both significant challenges and opportunities. U.S. EPA is supporting the development of several multi-pollutant pilot projects of limited scope. However, there are as yet no guidelines or off-the-shelf templates available to guide this effort.

Staff will provide an overview of the proposed scope and schedule for the 2009 CAP, and receive comments and suggestions from the Committee.

BUDGET CONSIDERATION / FINANCIAL IMPACT

None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: David Burch
Reviewed by: Henry Hilken