

## Attachment 2

### Public Comments and Staff Responses

This attachment is a review of comments made at community meetings held in East Palo Alto, Richmond, San Francisco, San Jose, Livermore, and Vallejo between August 23 and August 30, 2001 (Section I) and in letters received after initial adoption of the 2001 Plan on July 18, 2001 and before release of the Revised 2001 Plan (Section II).

#### ***Section I: Review of Comments from Community Meetings***

<b>COMMENTS ON TRANSPORTATION / MOBILE SOURCES AND CONTROLS</b>			
<b>#</b>	<b>Issue</b>	<b>Comment</b>	<b>Staff Response</b>
1	<b>Affordable Housing near Job Centers</b>	Subsidies should be used to support affordable housing near job centers.	MTC has developed a Housing Incentive Program, patterned after the successful program in San Mateo County. Additional incentives will be studied as part of Further Study Measure 5: Enhanced Housing Incentive Program.
2	<b>Bicycle Access on Vallejo Bridges</b>	Will there be bike access on the bridges out of Vallejo?	The new Carquinez Bridge, which is under construction, will have bike access across the bridge.
3	<b>Bus Retrofit Program / Clean Fuel Buses</b>	What has been the success of the bus retrofit program? Support MUNI's switch to clean fuel usage.	The BAAQMD is the major financial sponsor – via the Transportation Fund for Clean Air – of MUNI's ongoing Alternative Fuels Demonstration Program. This Program is evaluating electric-hybrid and natural gas engine technologies as potential low emitting options for future bus purchases. In response to direction from the San Francisco County Board of Supervisors, MUNI is accelerating compliance with State regulations on the control of diesel particulate matter by installing high efficiency particulate filters on all diesel buses. Completion of this effort is dependent upon securing adequate funds.
4	<b>Emission Inventory – Emissions from Sports Utility Vehicles</b>	SUVs seem to be a growing source of pollution and should be controlled, including setting more stringent fuel economy standards. These vehicles should also be taxed more.	The California Air Resources Board has strengthened emissions controls on sports utility vehicles and pick up trucks with the adoption of their new Low Emission Vehicle II (LEVII) standards. These regulations will be phased in beginning in 2004. Improving auto fuel efficiency will require Congress to act, as this standard is set at the federal, rather than state level. Because of the already high cost of these vehicles, it is unlikely that additional taxes would have a substantial impact on their popularity in the market.

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#	Issue	Comment	Staff Response
5	<b>Emission Inventory – Contribution from Vehicles from Outside the Bay Area</b>	Were these contributions evaluated?	<p>Yes, they are included in the Baseline emission estimates. Based on the latest validation of MTC's travel demand model, MTC estimates that about 10% of the daily vehicle miles of travel in the Bay Area are due to non-residents, i.e. people living outside the nine Bay Area counties. Further, the emission contribution from non-residents is higher in those parts of the Bay Area adjacent to major gateways into the region:</p> <ul style="list-style-type: none"> <li>• Eastern Alameda County: 30-35% of daily VMT is non-resident generated</li> <li>• Eastern Contra Costa County: 10-12% of the daily VMT is non-resident generated</li> <li>• Southern Santa Clara County: 25-30% of daily VMT is non-resident generated</li> <li>• Northern Solano County: 35-40% of the daily VMT is non-resident generated</li> </ul>
6	<b>Emission Inventory – Ethanol</b>	The NOx increase associated with the introduction of ethanol should be tracked.	The California Air Resources Board will adjust motor vehicle emission factors to account for the difference in NOx (and other pollutant) emissions. As new emission factor models are developed and released, the co-lead agencies will apply them in future plans.
7	<b>Emission Inventory – Marine Loading</b>	Address emissions from marine loading.	Emissions from marine loading operations are included in the emission inventory. The BAAQMD has regulated marine loading since 1989, when it adopted the nation's first VOC control regulation for loading of organic liquids into tankers (Regulation 8, Rule 44). The regulation requires that emissions be reduced by 95% or to 2 pounds per thousand barrels loaded. The 2001 Plan includes a further study measure (FS-11) to determine whether further emission reductions from this inventory category may be feasible in the future.
8	<b>Flex Time</b>	Flexible work hours should be required to spread out the commute, thus reducing congestion.	The co-lead agencies cannot require employers to offer flexible schedules to their employees. While flextime may produce some air quality benefit by spreading peak-period congestion, it also has the negative impact of making it more difficult to form carpools.

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#	Issue	Comment	Staff Response
9	<b>Further Study Measure – Particulate Traps on Buses</b>	Do traps work? How big a source of particulates are buses?	The amount of particulate emissions produced by urban buses is small regionally, with most diesel particulates coming from trucks. However, the contribution of buses to overall particulates is higher in the urban core where a number of buses operate. It is primarily for this reason, and not ozone reduction, that the further study measure has been suggested to see if their application to urban buses can be accelerated. Current particulate trap technologies work best on diesel buses with newer engines. The Bay Area's capital replacement program for transit buses will replace a large number of older buses with new or re-powered buses which are receptive to particulate traps.
10	<b>Further Study Measure – Reducing High Speed Travel</b>	Reducing freeway speeds will just lead to more back ups and more emissions.	The Further Study Measure would apply to very high-speed travel which occurs on many Bay Area freeways during many hours of the day. If top speeds could be reduced to 55-60 mph, there could be substantial emission reductions, since vehicles operating at high speeds also produce very high emissions. However, the relationship between high speeds and emission needs further study, using the latest motor vehicle emission data from CARB. This strategy could be applied during the smog season or intermittently during specific Spare the Air days. The further study measure will address all aspects of this strategy, including enforcement.
11	<b>General – Transportation Funding Balance</b>	Ensure funding balance between highways and transit.	Comment noted. For more detailed information on transportation expenditures in the Bay Area see the Investment Chapter in the draft 2001 Regional Transportation Plan.

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12	<b>General – Use of Various Modes of Transportation</b>	What is percentage of single occupant vehicle use compared to public and other transit use? Should funding match the percentage?	<p>The current breakdown of trips by mode of transportation and funding share over 25 years (funding share is in parentheses) from the draft 2001 Regional Transportation Plan is shown below. The availability of funds for different modes has historically varied over time, depending on the amount and allowed uses of the major federal and state transportation funding programs.</p> <p style="padding-left: 40px;">Auto: 84% (16%)</p> <p style="padding-left: 40px;">Transit: 6% (80%)</p> <p style="padding-left: 40px;">Walk: 9% (2%)*</p> <p style="padding-left: 40px;">Bike: 1% (2%)*</p> <p style="padding-left: 40px;">* Total for both bike and walk</p>
13	<b>High Occupancy Vehicle (HOV) Lanes (“Carpool Lanes”)</b>	Eliminating HOV lanes would significantly decrease stop and go traffic. Where do high usage HOV lanes exist during the commute hours?	<p>Caltrans monitors HOV lanes annually and publishes a report on their usage. The report indicates the number of carpool and buses using the HOV lanes, persons carried, and travel time savings provided by the HOV lanes. In terms of use, there are many HOV lanes that carry more people than the adjacent mixed flow lanes.</p> <ul style="list-style-type: none"> <li>• I-80 HOV lanes carry the same number of people as two mixed flow lanes during the peak hour.</li> <li>• Marin US 101 HOV lanes carry almost as many people as three mixed flow lanes in the southbound direction in the morning.</li> <li>• I-880 HOV lanes between I-580 and just north of the Santa Clara county line carry the equivalent of two mixed flow lanes of traffic.</li> <li>• Santa Clara Route 85 HOV lanes carry as many people as the adjacent mixed flow lanes.</li> </ul> <p>It is true that not every HOV lane is as highly used as these examples; but the HOV system is needed to ensure that this option for increasing the person carrying capacity of freeways is preserved as Bay Area traffic continues to increase.</p>

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14	<b>Medical Services for Those Experiencing Adverse Air Quality</b>	Use funding for Third Street light rail project for medical services instead of building the light rail project.	Funds for this project, which are primarily from local sales tax funds dedicated to transportation and some federal funds, could not be used to fund medical services since these are not eligible uses for those funds.
15	<b>School Trips</b>	Reduce long school trips through better planning	The nature of this comment is not entirely clear. Building more schools (K -12) would reduce the length of trips, but school districts rarely have these funds after Proposition 13 was passed in the late 70's.
16	<b>Smog Check Program</b>	Smog Check should be more aligned with alleviating ozone.	The Smog Check test used in the Bay Area includes both volatile organic compound and nitrogen oxide levels that cannot be exceeded. The 2001 Plan includes a control measure to improve the Smog Check Program in the Bay Area (Control Measure MS-1).
17	<b>Smog Check Program</b>	There should be more frequent checks and fraud should be reduced.	Currently, smog checks are performed on a biennial basis for most vehicles. More frequent checks would significantly increase the cost and inconvenience of the program, and is unlikely to yield significant benefits. Although fraud has been a major problem, many stations have been cited by the Bureau of Automotive Repair for fraudulent practices and still other stations have lost their licenses to perform smog checks. BAR now has an electronic data reporting system that is expected to significantly reduce fraud.
18	<b>Smog Check Program</b>	What reductions are attributable to the Smog Check Program?	It is difficult to isolate the discrete benefits of the Smog Check Program. Assumptions regarding its effectiveness are factored into the Air Resources Board's EMFAC 2000 computer program. Thus, the emissions inventory for on-road motor vehicles takes into account all Program benefits, including noncompliance, fraud, etc.

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19	<b>Smog Check Program</b>	The 4-year new car exemption (from Smog Check testing) should be deleted.	Generally, new cars perform well on Smog Check tests. Although some exempt cars can fail the tests, very few would. The excess emissions of all those that would fail are not significant relative to older vehicles, and especially vehicles over 20 years old. Simply put, the benefits to clean air of testing relatively new vehicles would not exceed the cost and inconvenience to motorists. Therefore, the District is not pursuing this recommendation as an element of Control Measure MS-1, Motor Vehicle Inspection and Maintenance Program.
20	<b>Smog Check Program</b>	The following should be considered: check smoke standards at tailpipe, combine inspection and repair, checks for liquid leaks and test the evaporative system.	There is currently a standard for visible smoke emanating from motor vehicles. Inspection and repair is combined, except for those vehicles that are directed to "test only" stations. A liquid leak check and an improved evaporative system test are part of Control Measure MS-1 (see page 40 of the Revised Plan).
21	<b>Smog Check Program</b>	The 2001 Ozone Plan should include a commitment to opt into the Smog Check II in the Bay Area, implemented as soon as possible, to reduce transport of emissions to the San Joaquin Valley.	The Bay Area 2001 Ozone Plan includes a control measure to improve the Smog Check program (Control measure MS-1) in the Bay Area and a further study measure (FS-6) to identify further ways to improve the Smog Check Program in the Bay Area. Additional changes to the Bay Area Smog Check program may result from the California Air Resources Board's action on transport mitigation requirements under the California Clean Air Act.
22	<b>TCM A – Regional Express Bus Program</b>	Such service is cost effective, especially in local corridors	Comment noted. MTC's Regional Express Bus program funds both express buses on freeways and Bus Rapid Transit (BRT) projects on local arterials.
23	<b>TCM A – Regional Express Bus Program/Livermore Area</b>	Will Livermore area get any new service from this program? Suggest new park and ride lots along I-580 with shuttles to BART.	Yes, there are two new express bus routes which MTC has approved for the Livermore area: 1) from the Livermore area to Silicon Valley, and 2) from Livermore area to Bishop Ranch. The idea of shuttle service from satellite park and ride lots to serve the overcrowded Dublin/Pleasanton BART station is being considered in the ongoing transit study in the I-580 corridor.

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24	<b>TCM C – Transportation for Livable Communities</b>	Why is this a new TCM when it is an existing program?	The federal transportation funding authorization expires in 2003. This TCM represents a commitment by MTC to continue this program beyond the current federal authorization period.
25	<b>TCM D – Expansion of Freeway Service Patrol</b>	What do roving tow trucks have to do with reducing pollution?	It is well known that traffic slows down near freeway incidents (stalled or disabled cars, accidents, etc). Over 50% of freeway delays have been attributed to incident-related congestion. This stop and go traffic creates excess air pollution. To the extent that these vehicles can be removed from the freeways faster by use of tow trucks, there will be less time when stop and go traffic occurs because of drivers slowing down to gawk. There will also be a safety improvement since stop and go conditions tend to lead to greater rear end accidents. The Bay Area had about 360 miles of freeways served by roving tow trucks in 2000; this TCM adds a new increment of 55 miles.
26	<b>Traffic – Elimination of Bridge Tolls</b>	Why collect tolls that cause queuing and excess emissions?	Tolls do not really create excess emissions. Since traffic on most of the Bay bridges exceeds the capacity of the existing lanes on the bridges during commute hours, there would be backups and stop and go traffic on the bridges anyway. Collection of tolls actually provides a slight benefit by metering traffic, that is by having traffic stop and then proceed, much like the metering lights on the Bay Bridge.
27	<b>Traffic – Elimination of highway bottlenecks</b>	There is a need for more highway-oriented TCMs that eliminate lane bottlenecks that cause traffic slow downs and excess emissions.	Major highway projects take a number of years to plan, design, and construct. All the highway projects that will be operational by 2006 have been assumed in the baseline emission calculations for 2006, the attainment deadline. It would not be possible to add “new” projects since all existing funding has been identified and committed to a specific set of planned improvements.
28	<b>Traffic – Emissions from Stalled Traffic</b>	Study emissions from stalled traffic.	The emission factors (EMFAC 2000) developed by CARB reflect real world driving cycles from trip start to trip end, and therefore include the effects of vehicles traveling at slower speeds and in stop and go traffic. CARB is constantly updating their motor vehicle emission database using the latest testing results.

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29	<b>Traffic – Meters for Freeway On-Ramps</b>	Metered freeway on-ramps are bad for air quality.	Metering traffic using freeway on-ramps involves a tradeoff which is ultimately beneficial for air quality. The fact that some vehicles entering the freeway are slowed down and must then accelerate to enter the freeway traffic stream is more than compensated for by the larger emission reductions achieved by having all the traffic on the freeway moving at a constant, and more efficient speed in terms of vehicle emissions.
30	<b>Transit</b>	Trying to force people out of their cars will not work. Transit is already full in many corridors (e.g. BART to San Francisco). Where are we going to put the people?	Expanding transit service in corridors where the buses and trains are already overcrowded would require adding buses or using larger vehicles. Thus either new funding would be required or equipment would need to be reallocated within a transit operator's service area. At the same time, the argument can be made that there is no further room on many highways to add cars, and the amount of needed to "cure" highway congestion does not exist now or in the foreseeable future. Therefore, the "right" balance of transit and highway capacity depends on the specific corridor and funding opportunities available to make such improvements.
31	<b>Transit – Inadequate Bus Service for Transit Dependent Communities</b>	Inadequate service; need 24 hours/7 days.	This issue is a mobility issue and less of an air quality issue since the population that would be served is already largely transit dependent. From the mobility side, MTC is developing a Lifeline Transit System, which will identify spatial and temporal gaps in transit service between concentration of transit dependent households and their most frequently traveled destinations: school, grocery stores, medical centers, government centers, child care, churches, etc. This definition and needed funding will be completed by November 2001.
32	<b>Travel Demand Management (TDM)</b>	Implement TDM measures that were scrapped.	To the extent that this comment relates to employer TDM measures, the State legislature has acted to prohibit air districts from enacting mandatory trip reduction measures for employers. Thus, given the legislature record on this issue and the current economic climate, it is unlikely that such a proposal would be successful. Local jurisdictions may seek certain kinds of mitigations from local development projects based on their land use regulation powers.



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#	Issue	Comment	Staff Response
33	<b>Diesel Generators</b>	What impact do diesel generators used by businesses have on air quality?	Emissions from diesel generators – largely nitrogen oxides and small particles – are addressed on page 6 of the Revised Plan. We expect diesel generator emissions will be higher through 2005 due to California’s power crisis. Reducing diesel generator emissions does not help attain the national ozone standard, since the region needs volatile organic compound emission reductions in order to reduce ambient ozone. Nonetheless, reducing diesel particulates is critical to efforts to reduce public exposure to toxic air contaminants.
34	<b>Electric Power Plants</b>	The plan should include NOx controls on power plants.	BAAQMD Regulation 9, Rule 11 imposes extremely stringent controls on NOx emissions from power plants. No California air district regulation on existing power plant is more stringent than the BAAQMD regulation, which is significantly more stringent than controls in other states. The plan does not include these controls because, though they further other air quality goals, they would not advance the attainment date for the national ozone standard. They are therefore not a reasonably available control measure.
35	<b>Electric Power Plants</b>	The plan should require SCONOx for all power plants.	Pursuant to 42 U.S.C. §7479, best available control technology (BACT) means “an emission limitation” rather than a particular pollution control technology. The District requires BACT for all new power plants. For the large combined cycle turbines generally used in new power plants, BACT for NOx is defined as 2 ppm. There is no need or requirement to specify any particular technology to meet this BACT level, even though 2 ppm can be met by SCONOx or dry low-NOx combustors with selective catalytic reduction (SCR). SCONOx is simply one NOx control technology that can be used for power plants. Because all of the available NOx control technologies involve tradeoffs, the District properly specifies an emissions limit to be met rather than a specific technology when applying BACT to new sources. This is important as it encourages the development of other competing technologies. Because requiring a specific control technology would not produce additional NOx reductions, this is not a reasonably available control measure.
36	<b>Emission Inventory –</b>	Do emissions from asphalt roads and hydrocarbons from plants increase on hot days and contribute to ozone.	While the emission inventory in the Plan includes only anthropogenic (man made) emissions, vegetation does emit

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	<b>Biogenic Emissions / Asphalt Roads</b>		hydrocarbons and can increase ozone levels. This effect is taken into account in the modeling of emissions included in the Plan's attainment assessment. The effect from asphalt roads is to increase the ambient temperature above the level of an unpaved road. Higher temperatures result in more ozone formation.
37	<b>Emission Reduction Credits</b>	The plan should eliminate emission reduction credits.	The only uses for emission reduction credits within the BAAQMD are for meeting state and federal new source offset requirements and for compliance with certain future compliance dates in two District NOx regulations (Regulation 9, Rules 10 and 11). In addition, state law requires that air districts allow the use of credits. The elimination of credits would make it difficult for new modern plants to locate within the District, since credits provide one of the only means that many new facilities have of meeting offset requirements (which implement the State's and the District's no net increase in emissions policy). These new facilities generally replace older, higher-emitting facilities. Elimination of credits would mean, for example, that new power plants could not be built in the most appropriate locations and that demand for increased power would have to come from existing, dirtier facilities. The use of interchangeable emission reduction credits allow facilities subject to Regulation 9, Rules 10 and 11 to comply with the stringent NOx requirements in those rules by making reductions at other sources, where costs are lower, or through early implementation of controls. Eliminating credits used for these purposes would produce no net reduction in emissions and would violate federal and state new source review requirements.
38	<b>Emission Reduction Credits – EIR</b>	There should be an EIR for emission reduction credits.	Allowing the use of ERCs is not a new control measure proposed in the 2001 Plan. Furthermore, the 2001 Plan does not contemplate any changes in how the District's ERC requirements are applied. Therefore, the 2001 Plan's Negative Declaration does not (and is not required to) address ERCs.
39	<b>Marine Tank Vessel Controls</b>	The plan should include a measure to require marine vapor recovery for loading of all cargoes.	BAAQMD Regulation 8, Rule 44 requires control for loading of specified cargoes ( gasoline, gasoline blending stocks, aviation gas, JP-4 aviation fuel, and crude oil). The rule requires that emissions be limited to 2 lbs/1000 barrels or reduced by 95%. The cargoes subject to the rule are the only cargoes loaded in significant

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			<p>quantities for which emission reductions are certain to be significant (although JP-4 is no longer used by military aircraft and is no longer loaded). For example, EPA's AP-42 emission factor for uncontrolled gasoline loading is 75 lbs/1000 barrels, though the factor can be several times higher, depending upon loading and tank conditions. Making liquids for which emissions are less than 2 lbs/1000 barrels subject to the rule would result in no emission reductions, since the rule requires that emissions be limited to 2lbs/1000 barrels or reduced by 95%. Aside from liquids already subject to the rule, the only other liquids that appear to be loaded in the Bay Area in significant quantities are distillate oil and residual oil, according to U.S. Army Corps of Engineers waterborne commerce data. EPA emission factors for loading these materials are 0.2 lbs/1000 barrels for distillate oil and 0.002 lbs/1000 barrels for residual oil. However, based on a test of vessel loading in the Los Angeles area, the EPA emission factors may understate emissions. As a result, the 2001 plan includes further study measure FS-11, through which the District would examine whether there are any potential emission reductions that could come from controlling these relatively non-volatile cargoes.</p>
40	<b>Off-Gassing from Materials Used in New Car Interiors</b>	The plan should consider off-gassing from upholstery, carpet, and other materials used in new car interiors.	<p>Some research has been done to identify the sources of volatile organic compounds found in a car's interior. This work suggests that many of the compounds come from volatilization of lubricants and from off-gassing of materials used in the automobile interior. The primary materials used are vinyl, nylon, synthetic rubber, and polyurethane foam. This off-gassing appears to decline as the vehicle ages. While in the relatively small volume of a car interior, these compounds may be objectionable, their total mass is too small to contribute in any significant way to ozone formation. In addition, because the mass emissions are so small, control would not be cost effective. For those concerned about exposure to these chemicals, a car could be aired out briefly before driving, particularly on hot days, when volatilization and off-gassing would be higher.</p>
41	<b>Spare the Air Program</b>	Spare the Air measures should be elevated. More incentives should be provided. Outreach and awareness should be improved.	Comment noted.

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#	Issue	Comment	Staff Response
42	<b>Spare the Air Program</b>	Develop and launch a public information campaign regarding ozone precursors from mobile sources similar to the campaign that has resulted from the energy crisis or informational campaigns conducted in Palo Alto.	The BAAQMD Spare the Air Program includes a visible campaign focused on reducing mobile source emissions.
43	<b>Spare the Air Program</b>	Recognize the limited benefits of fireplaces as a source of heat in the home.	The BAAQMD Spare the Air Program provides information on the inefficiency of fireplaces, in an effort to curtail woodsmoke during the winter months.
44	<b>Vapor Recovery for Aircraft Fueling</b>	The plan should include vapor recovery for aircraft fueling.	There are two main types of aircraft refueling in the Bay Area: jet refueling with kerosene-type jet fuel and general aviation refueling with aviation gas. Because the volatility of jet fuel is extremely low - similar to that of diesel - emissions from fueling of jets are minimal. Aviation gas, used for fueling general aviation, is generally only slightly less volatile than automotive gasoline and therefore may produce emissions similar to automotive fueling. However, aviation gas throughput in the Bay Area is a tiny fraction of that for automotive gasoline. ARB has estimated that statewide emissions from general aviation, including all engine and fueling emissions, are only 5 tons per day. Fueling emissions in the Bay Area are a small fraction of that total. Even were these emissions significant, controlling the emissions would be difficult. This is because requiring the installation of Phase II vapor recovery (the system for transfers into a vehicle or aircraft) would involve questions of safety over which the Federal Aviation Administration has jurisdiction. Note, however, that Phase I vapor recovery (the system for fuel transfers into storage tanks at a refueling facility) does not raise these same issues. Phase I vapor recovery for aviation gas deliveries is already required for airports under BAAQMD regulations. This suggested control measure is not a reasonably available control measure.

## Section II: Review of Comment Letters

<b>COMMENTS ON TRANSPORTATION / MOBILE SOURCES AND CONTROLS</b>			
<b>#</b>	<b>Issue</b>	<b>Comment and Source of Comment</b>	<b>Staff Response</b>
45	<b>Clean Air Act Sanctions</b>	<b>Leonard R. Trimlett</b> ( <i>letter, August 27, 2001</i> ) Mr. Trimlett questions the co-lead agencies' position that highway funds are in jeopardy, citing a section of federal law that limits federal authority to sanction for non-implementation of "one or more of the management systems".	Mr. Trimlett's cite is from the bill that designated the National Highway System (NHS). The Intermodal Safety Transportation and Efficiency Act (commonly referred to as "ISTEA") required the U.S. Department of Transportation to develop rules that would require states to create and maintain various management systems – for safety, bridge, pavement, and congestion management. In 1996, Congress included language as part of the enacted NHS bill that ensured that highway funding sanctions would not apply in the event a state chose not to implement one or more of the required management systems. The NHS bill did not affect provisions for sanctions under the Clean Air Act. Thus, the Clean Air Act's highway funding sanctions remain a tool for EPA to employ should the Bay Area not meet federal air quality planning requirements for the national ozone standard.
46	<b>Congestion Management</b>	<b>Leonard R. Trimlett</b> ( <i>letter, August 27, 2001</i> ) Mr. Trimlett noted that congestion at bottlenecks often increases stop and go driving, and that elimination of these bottlenecks would reduce pollution. He provided the approach to the Caldecott Tunnel as an example.	While stop and go driving does result in higher pollution than smooth traffic flow, adding freeway capacity may increase total vehicle miles traveled in areas that are constrained by lack of capacity. Because of the projected growth in Bay Area travel, many corridors will continue to experience heavy demand even after travel improvements are made.
47	<b>Diesel Bus Emissions</b>	<b>Kathleen Frumkin</b> ( <i>letter, September 7, 2001</i> ) Ms. Frumkin expressed concern about bus soot and noise pollution in her neighborhood.	We share your interest in reducing diesel bus emissions, and we have some programs with incentive funding to secure newer, cleaner buses. Much of the money has gone to cleaner school buses, because children are more susceptible to air pollution health hazards. The California Air Resources Board adopted a regulation in February 2000 requiring urban transit fleets to clean up their emissions. The regulation should reduce Bay Area NOx emissions by at least one ton per day in 2020. Control of particulate matter emissions is also required, because the diesel particulate poses the greater health hazard, to children and adults. The various transit operators, including AC Transit, want to operate cleaner fleets, and will have to comply with the new State regulations. They are buying cleaner new diesel buses, and in some cases, even cleaner natural gas fueled vehicles. The pace of this cleanup is constrained by their available funding. Public transit must be subsidized heavily,

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			because passenger fares do not cover the actual costs. So the counties and cities that operate transit buses have to find the money to buy new buses.
48	<b>Highway Maintenance</b>	<b>Leonard R. Trimlett</b> ( <i>letter, August 27, 2001</i> ) Mr. Trimlett indicated that most highway funds are going toward mass transit, and that little funding is going toward the repair of highways.	Indeed, transportation funding has seen some significant shifts over the last 20 years, and much of the highway maintenance work is now funded locally. In the early 1990s, federal law was changed to allow a small portion of highway funds to be flexed to mass transit. We have noted your comments.
49	<b>Ramp Metering</b>	<b>Leonard R. Trimlett</b> ( <i>letter, August 27, 2001</i> ) Mr. Trimlett recommended the planting of shrubbery on freeways as a new control measure for the 2001 Plan.	Although increasing vegetation that can shade pavement may lead to cooler roadway surfaces on hot days, we question whether shrubbery would provide sufficient canopy to result in the desired effect. Trees could provide more shading, but they pose serious safety concerns, especially if employed along freeways. Adding large amounts of vegetation can have negative consequences for ozone attainment, as many species produce high amounts of volatile organic compounds (VOCs). The Bay Area must reduce VOCs to attain the national ozone standard.
50	<b>Signal Timing</b>	<b>Leonard R. Trimlett</b> ( <i>letter, August 27, 2001</i> ) Mr. Trimlett stated that further emissions reductions could be achieved by timing signals throughout the region.	Signal timing is already included as a control measure in the 2001 Plan, carried forward from previous plans. Please refer to Transportation Control Measures 24 and 25 in Appendix D, Table 3 of the Revised Plan (pp. 135-136). MTC has indicated that they will continue to implement additional signal timing through TCM 25.

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<b>#</b>	<b>Issue</b>	<b>Comment and Source of Comment</b>	<b>Staff Response</b>
51	<b>Electric Power Plants</b>	<b>Communities for a Better Environment</b> ( <i>letter to Dr. Alan Lloyd and ARB Board Members, August 9, 2001</i> ) The plan should include a measure to limit electric power plant NOx emissions to 1.5 ppm using ammonia-free technology, as required in Massachusetts.	Massachusetts requires new power plants to meet a NOx limit of 2 ppm. This is a Best Available Control Technology (BACT) standard that applies only to new power plants and is therefore not a reasonably available control measure for existing power plants. The BAAQMD applies this same BACT standard for new power plants. For existing power plants, Massachusetts' requirements (found in 310 Code of Massachusetts Regulations 7.29) are

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			significantly less stringent than current BAAQMD requirements. Because this suggested measure would not achieve any emission reductions beyond those achieved by Bay Area regulations, it is not a reasonably available control measure.
52	<b>Pressure Relief Valves (PRVs)</b>	<b>Communities for a Better Environment</b> ( <i>letter to Dr. Alan Lloyd and ARB Board Members, August 9, 2001</i> ) The plan should include a measure to control emissions from pressure relief valves by banning atmospheric venting and by requiring rupture discs with tell-tale indicators [to monitor PRV lifts].	<p>A ban on atmospheric venting was proposed by CBE in comments on the 1999 Plan and in an attachment to a Golden Gate University comment on the Draft 2001 Plan (see staff review of suggested measures 2 and 11 in the Plan's RACM analysis). This is not a reasonably available control measure.</p> <p>However, CBE has augmented its earlier comments by suggesting the use of rupture discs with tell-tale indicators as a monitoring device for PRV lifts. CBE made this same suggestion in 1997 during the development of BAAQMD Regulation 8, Rule 28 (the only controls on PRV venting emissions in California). At the time, the District concluded that fragments from rupture discs can jam a PRV open, thereby increasing emissions. However, some vendors of rupture discs claimed that this problem can be overcome with improved designs. Because of the risks and uncertainty, requirements for rupture discs were not adopted in 1997. Though this measure is not a reasonably available control measure at present, an examination of it and other measures to reduce flows to the refinery blowdown system is included in further study measure FS-8.</p>
53	<b>Flares</b>	<b>Communities for a Better Environment</b> ( <i>letter to Dr. Alan Lloyd and ARB Board Members, August 9, 2001</i> ) The plan should include a measure requiring minimization of flaring through increased gas recovery and requiring video monitoring of flares.	<p>This measure was proposed by CBE in comments on the 1999 Plan and in an attachment to a Golden Gate University comment on the Draft 2001 Plan (see staff review of suggested measures 4 and 12 in the Plan's RACM analysis). Though reducing emissions from flares is not a reasonably available control measure at present, an examination of the feasibility of reducing flaring is included in further study measure FS-8.</p> <p>CBE augments its earlier comments by suggesting the use of video monitoring of flares with access through the internet. Video monitoring does not result in emission reductions and is therefore not a reasonably available control measure. However, the use of video monitoring will be explored as a rule enforcement and</p>

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			compliance measure during the implementation of control measure SS-15.
54	<b>Vessel Depressurization</b>	<b>Communities for a Better Environment</b> ( <i>letter to Dr. Alan Lloyd and ARB Board Members, August 9, 2001</i> ) The plan should include a measure to eliminate emissions from depressurization.	This measure was proposed by CBE in comments on the 1999 Plan and in an attachment to a Golden Gate University comment on the Draft 2001 Plan (see staff review of suggested measures 8 and 14 in the Plan's RACM analysis). Further control of emissions from vessel depressurization is a reasonably available control measure and has been included in the 2001 Plan.
55	<b>Shrubbery to Cool Roadway Surfaces</b>	<b>Leonard R. Trimlett</b> ( <i>letter, August 27, 2001</i> ) Mr. Trimlett recommended the planting of shrubbery on freeways as a new control measure for the 2001 Plan.	Although increasing vegetation that can shade pavement may lead to cooler roadway surfaces on hot days, we question whether shrubbery would provide sufficient canopy to result in the desired effect. Trees could provide more shading, but they pose serious safety concerns, especially if employed along freeways. Adding large amounts of vegetation can have negative consequences for ozone attainment, as many species produce high amounts of volatile organic compounds (VOCs). The Bay Area must reduce VOCs to attain the national ozone standard.
56	<b>Storage Tanks</b>	<b>Communities for a Better Environment</b> ( <i>letter to Dr. Alan Lloyd and ARB Board Members, August 9, 2001</i> ) The plan should include a measure for further control of emissions from storage tanks through vapor recovery or the installation of fixed roofs on external floating roof tanks and through control of emissions from tank cleaning.	This measure was proposed by CBE in comments on the 1999 Plan and in an attachment to a Golden Gate University comment on the Draft 2001 Plan (see staff review of suggested measures 3 and 13 in the Plan's RACM analysis). As discussed in the RACM analysis, this measure is not currently a reasonably available control measure. However, another measure to reduce storage tank emissions - more stringent requirements for tank seals - is included in control measure SS-12. In addition, a further study measure (FS-10) is included to determine whether further emission reductions from storage tanks may be feasible in the future.
57	<b>Superfund</b>	<b>Leonard R. Trimlett</b> ( <i>letter, August 27, 2001</i> ) Mr. Trimlett asked whether the federal Superfund program is being used in the 2001 Plan.	Superfund site remediation work is not an ozone reduction strategy. For more information on Bay Area Superfund work, please refer to EPA Region IX's Superfund website: <a href="http://www.epa.gov/region09/waste/sfund/">http://www.epa.gov/region09/waste/sfund/</a>
58	<b>Marine Tank Vessels</b>	<b>Communities for a Better Environment</b> ( <i>letter to Dr. Alan Lloyd and ARB Board Members, August 9, 2001</i> ) The plan should include a measure to require marine vapor recovery for loading of all cargoes, regardless whether the emission factor	BAAQMD Regulation 8, Rule 44 requires control for loading of specified cargoes ( gasoline, gasoline blending stocks, aviation gas, JP-4 aviation fuel, and crude oil). The rule requires that emissions be limited to 2 lbs/1000 barrels or reduced by 95%. The cargoes



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		<p>for the cargo is above or below 2 lbs/1000 barrels; the measure should also prohibit vessel purging.</p>	<p>subject to the rule are the only cargoes loaded in significant quantities for which emission reductions are certain to be significant (although JP-4 is no longer used by military aircraft and is no longer loaded). For example, EPA's AP-42 emission factor for uncontrolled gasoline loading is 75 lbs/1000 barrels, though the factor can be several times higher, depending upon loading and tank conditions. Making liquids for which emissions are less than 2 lbs/1000 barrels subject to the rule would result in no emission reductions, since the rule requires that emissions be limited to 2lbs/1000 barrels or reduced by 95%. Aside from liquids already subject to the rule, the only other liquids that appear to be loaded in the Bay Area in significant quantities are distillate oil and residual oil, according to U.S. Army Corps of Engineers waterborne commerce data. EPA emission factors for loading these materials are 0.2 lbs/1000 barrels for distillate oil and 0.002 lbs/1000 barrels for residual oil. However, based on a test of vessel loading in the Los Angeles area, the EPA emission factors may understate emissions. As a result, the 2001 plan includes further study measure FS-11, through which the District would examine whether there are any potential emission reductions that could come from controlling these relatively non-volatile cargoes.</p> <p>CBE proposed controls on marine tank vessel purging in comments on the 1999 Plan. This is not a reasonably available control measure (see staff review of suggested measure 9 in the Plan's RACM analysis). However, further study measure FS-11 includes a reexamination of this issue.</p>
<p><b>59</b></p>	<p><b>Refinery Valves, Connectors, Pumps, and Compressors</b></p>	<p><b>Communities for a Better Environment</b> (<i>letter to Dr. Alan Lloyd and ARB Board Members, August 9, 2001</i>) The plan should include a measure to eliminate exemptions from the standards so that current standards apply to all devices.</p>	<p>This measure was proposed by CBE in comments on the 1999 Plan. This is not a reasonably available control measure (see staff review of suggested measure 6 in the Plan's RACM analysis).</p>
<p><b>60</b></p>	<p><b>Refinery Wastewater Systems</b></p>	<p><b>Communities for a Better Environment</b> (<i>letter to Dr. Alan Lloyd and ARB Board Members, August 9, 2001</i>) The plan should include a measure to require large wastewater units to be vented to gas recovery systems and to require the entire wastewater system to be enclosed, including front-end drainage and back-end ponds.</p>	<p>This measure was proposed by CBE in comments on the 1999 Plan and in an attachment to a Golden Gate University comment on the Draft 2001 Plan. This is not currently a reasonably available control measure (see staff review of suggested measures 5 and 15 in the Plan's RACM analysis). Though reducing emissions from refinery wastewater systems is not a reasonably available control measure</p>

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			at present, an examination of the feasibility of reducing these emissions is included in further study measure FS-9.
<b>61</b>	<b>Refinery NOx Controls</b>	<b>Communities for a Better Environment</b> ( <i>letter to Dr. Alan Lloyd and ARB Board Members, August 9, 2001</i> ) The plan should include a measure to require all refinery boilers to meet a 10 ppm standard with no averaging between different units.	This measure was proposed by CBE in comments on the 1999 Plan (see staff review of suggested measure 7 in the Plan's RACM analysis). The BAAQMD refinery boiler rule (Regulation 9, Rule 10) is as stringent as any in California, and meets federal RACT requirements. Further NOx reductions would not advance the attainment date, and this is not a reasonably available control measure.
<b>62</b>	<b>Smog Check</b>	<b>Communities for a Better Environment</b> ( <i>letter to Dr. Alan Lloyd and ARB Board Members, August 9, 2001</i> ) The plan should include a measure to subsidize Smog Check vehicle repairs for low-income drivers.	The California Bureau of Automotive Repair (BAR) already operates a program called the Consumer Assistance Program (CAP) to provide repair subsidies for low-income drivers. This program, or any similar program, would not produce any emission reductions beyond those already attributable to the Smog Check program and is therefore not a reasonably available control measure. However, it does reduce the burden of the program on low-income drivers.

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