

DRAFT

Table 1. Master List of Potential Control Measures for 8-hour Ozone SIP (last modified July 20, 2005)

List #	Measure	Description	Emission Reduction Potential	Feasibility	Cost per Ton	Timeframe (2007 or 2009)	PM2.5 Co-Benefits
Stationary Sources							
S 1	Reductions from EGUs: OTC Model Rule	Adopt OTC Multipollutant Model Rule for EGUs.	H	M/H	L	2007	Yes
S 2	Upwind NOx Controls: Expand NOx RACT to Upwind Counties	Expand NOx RACT Requirements.	H	*	L	2007	Yes
S 3	Upwind NOx Controls: Plant-by-Plant BACT Controls	Identify and Require Additional Facility-Specific Emission Reduction Technologies.	M/H	*	M/H	2007	Yes
S 4	Upwind VOC Controls: Expand VOC RACT to Upwind Counties	Expand VOC RACT Requirements.	M	*	M	2007	-
S 5	Upwind VOC Controls: Plant-by-Plant BACT Controls	Identify and Require Additional Facility-Specific Emission Reduction Technologies.	L/M	*	M/H	2007	-
S 6	Reductions from EGUs Plant RACT/Technology-Based Approach	Identify and Require Additional Power Plant-Specific Emission Reduction Technologies.	M	L	H	2007	Yes
S 7	State Multipollutant Legislation	Adopt State Multipollutant Legislation.	M	L	L	2009	Yes
S 8	OTC Model Rule: Additional Small NOx Source Reductions	Adopt OTC Additional NOx Controls Rule throughout nonattainment area (applies to industrial boilers, stationary combustion turbines and reciprocating engines, emergency generators, load shavers and cement kilns).	L	L/M	M	2007	Yes
S 9	Energy Efficiency Programs	Increase Adoption of Energy Efficient Technology by Government and the Private Sector with Commensurate Retirement of EGU NOx Allowances.	L	L/H	L	2007	-
S 10	Energy Efficiency Standards	Establish requirements for minimum energy efficiency, with Commensurate Retirement of EGU NOx Allowances.	L	L	L	2007	-
S 11	Green Building Code Program	Establish energy efficiency standards for building codes, with Commensurate Retirement of EGU NOx Allowances.	L	L	L	2009	-

DRAFT

Table 1. Master List of Potential Control Measures for 8-hour Ozone SIP (last modified July 20, 2005)

List #	Measure	Description	Emission Reduction Potential	Feasibility	Cost per Ton	Timeframe (2007 or 2009)	PM2.5 Co-Benefits
S 12	Renewable Portfolio Standards	Increase Purchases of Renewable Energy by Government and the Private Sector, with Commensurate Retirement of EGU NOx Allowances.	L	M	H	2007	-
S 13	Solar Photovoltaic Programs	Increase Purchases and Installation of Renewable Energy sources by Government and the Private Sector, with Commensurate Retirement of EGU NOx Allowances.	L	H	H	2007	-
S 14	Wind Energy Purchases	Increase Purchases of Renewable Energy by Government and the Private Sector, with Commensurate Retirement of EGU NOx Allowances.	L	L/H	H	2007	-
S 15	Control Asphalt and Concrete Facilities	Require NOx emission limits on asphaltic concrete production facilities.	L	?	?	2007	-
S 16	Enhanced Enforcement/Rule Compliance at Existing Stationary Sources	Step up enforcement of and compliance with existing rules for emissions control by stationary sources.	L	L	L	2005	-
S 17	Episodic Mandatory Facility Reductions	Require mandatory facility reductions on Air Quality Action Days.	?	?	H	2007	-
S 18	LED Traffic Signal Retrofit Program	Increase use of more energy efficient LED traffic signals.	L	M	?	2007	-
S 19	Mitigation Fees: Preempted Sources	Charge emission mitigation fee to federally preempted sources.	L/M	L	?	2007	-
S 20	Chemical Industry Controls	Reduce upwind NOx emissions limits in the manufacture of chemicals.	?	?	?	?	-
S 21	Clear Skies Act	Implement Clear Skies Legislation.	H	L	L	2010	-
S 22	Energy Star Exit Signs	Increase market penetration of Energy Efficient Lighting (EXIT Signs)	L	M	?	2007	-
S 23	Enhanced Enforcement a	Review enforcement and compliance practices at stationary sources. Conduct compliance and enforcement audits.	L	M	H	2005	-

DRAFT

Table 1. Master List of Potential Control Measures for 8-hour Ozone SIP (last modified July 20, 2005)

List #	Measure	Description	Emission Reduction Potential	Feasibility	Cost per Ton	Timeframe (2007 or 2009)	PM2.5 Co-Benefits
S 24	Forest Product Industry Controls	Control Upwind Wood, Paper and Pulp Production Emissions.	L	L	?	2009	-
S 25	Local Cap and Trade Program	Implement cap and trade program for VOC sources in region. Consider California RECLAIM program.	L/M	L	?	2007	-
S 26	Low NOx Fuel Oil for Stationary Sources	Require oil-burning stationary sources to burn ThernaNOx, a low-NOx No. 2 fuel oil emulsion, during ozone season.	L	L	?	2007	-
S 27	Metallurgical Industry Controls: Iron and Steel	Control Upwind Iron and Steel Production Emissions.	L	L	?	?	-
S 28	Metallurgical Industry Controls: Lead	Control Upwind Lead Smelter Emissions.	L	L	?	?	-
S 29	Metallurgical Industry Controls: Aluminum	Control Upwind Aluminum Production Emissions.	L	L	?	?	-
S 30	Metallurgical Industry Controls: Zinc/Copper	Control Upwind Zinc/Copper Smelter Emissions.	L	L	?	?	-
S 31	Mineral Products Industry Controls: Cement	Control Portland Cement Facility Emissions.	L	L	?	2007	-
S 32	Mineral Products Industry Controls: Asphalt	Control Asphalt Facility Emissions.	L	?	?	2007	-
S 33	Mineral Products Industry Controls: Glass and Fiberglass	Control Glass and Fiberglass Facility Emissions.	L	L	?	2007	-
S 34	Mineral Products Industry Controls: Lime	Control Upwind Lime Facility Emissions.	L	L	?	?	-
S 35	Mineral Products Industry Controls: Phosphate	Control Upwind Phosphate Rock Plant Emissions.	L	L	?	?	-
S 36	Control VOC Emissions from Chemical Manufacturing	Chemical Manufacturing: More stringent standards on the manufacture of polymers, pharmaceuticals, paints, varnishes, soaps, detergents, inks, solvents, fuel additives, acids, fertilizers, and resins.	L	L	?	?	-

DRAFT

Table 1. Master List of Potential Control Measures for 8-hour Ozone SIP (last modified July 20, 2005)

List #	Measure	Description	Emission Reduction Potential	Feasibility	Cost per Ton	Timeframe (2007 or 2009)	PM2.5 Co-Benefits
S 37	Control VOC Emissions from Polystyrene Manufacturing	Reduce VOC emission form expandable polystyrene (EPS) molding (also known as foam blowing) operations.	L	L	?	2007	-
S 38	Control VOC Emissions from Polyester Resin Manufacturing	Reduce VOCs from polyester resin operations.	L	L	?	2007	-
S 39	Control VOC Emissions from Formica Manufacturing	Reduce VOC emissions from polyester resin operations used to manufacture Formica.	L	L	?	2007	-
S 40	Control VOC Emissions from Wood and Paper Manufacturing	Reduce VOC emissions from the production of wood and paper products.	L	L	?	2007	-
S 41	Statewide Emission Registration Program	Require a mandatory statewide registration program for all NOx and VOC emission sources.	L/M	L	H	2007	-
							-
Area Sources							
A 1	Expand OTC AIMs Rule	Expand OTC AIMs Rule to Upwind Counties.	M	*	L/H	2007	-
A 2	Expand OTC Consumer Products Rule	Expand OTC Consumer Product Rule to Upwind Counties.	L/M	*	L/H	2007	-
A 3	Expand OTC Mobile Equipment Repair and Refinishing Rule	Expand OTC Mobile Equipment Repair and Refinishing Rule to Upwind Counties.	L/M	*	L/H	2007	-
A 4	Expand OTC Portable Fuel Containers Rule	Expand OTC Portable Fuel Containers Rule to Upwind Counties.	L/M	*	L/H	2007	-
A 5	Expand OTC Solvent Cleaning Rule	Expand OTC Solvent Cleaning Rule to Upwind Counties.	L/M	*	L/H	2007	-
A 6	Expand Coverage of OTC Consumer Products Rule	Expand Number of Products Covered by OTC Consumer Product Rule.	L/M	L/M	L/H	2007	-
A 7	"Cash for Clunkers" Gasoline Containers Replacement Program	Accelerate the Replacement of Older Gasoline Cans with CARB Compliant Containers. Offer incentives for consumers to turn in old gas cans and obtain new ones.	L	H	L	2006	-

DRAFT

Table 1. Master List of Potential Control Measures for 8-hour Ozone SIP (last modified July 20, 2005)

List #	Measure	Description	Emission Reduction Potential	Feasibility	Cost per Ton	Timeframe (2007 or 2009)	PM2.5 Co-Benefits
A 8	Low-Emission Asphalt	Adopt SCAQMD Rules 1108: Cutback Asphalt (less than 0.5% VOC evaporating at 260F) and 1108.1: Emulsified Asphalt (less than 3% VOC evaporating at 260F).	L	M	?	2007	-
A 9	Control Landfills and Wastewater Facilities	Reduce the NOx and VOC emission limits for flares.	L	?	?	2007	-
A 10	Expand Seasonal Open Burning Restrictions	Expand Prohibitions on Seasonal Open Burning.	L	M	L	2007	-
A 11	Expand Stage I Vapor Recovery	Expand Requirements for Stage I Vapor Recovery to upwind counties.	L	L	?	2007	-
A 12	Expand Stage II Vapor Recovery	Expand requirements for Stage II Vapor Recovery to upwind counties.	L	L	?	2007	-
A 13	Expand Presumptive RACT Requirements.	Expand Surface Cleaning/Degreasing/Auto Repair Requirements	M	M	L	2007	-
A 14	Control Growth and Development: Land Use Restrictions	Implement land use restrictions to control residential, commercial, and industrial development in the nonattainment area.	L	M	H	2007	-
A 15	Control Growth and Development: Mitigate New Development	Mitigate emissions from new development.	L	M	H	2007	-
A 16	Control Restaurant Sources	Implement programs to reduce emissions from restaurants, including charbroil operations and deep fat fryers.	L	L*/M	?	2007	-
A 17	Control Bakeries	Adopt SCAQMD Rule 1153: Commercial Bakery Ovens. Reduce exemption level and set standards for unregulated bakeries.	L	M	?	2007	-
A 18	Control Drycleaning Facilities	Ban transfer systems in Petroleum Dry Cleaning.	L	?	?	2007	-
A 19	Control Agricultural Sources	Implement programs to reduce emissions from livestock waste.	L	?	?	2007	-
A 20	Control Agricultural Sources	Encourage agricultural best practices, including those that reduce pesticide use.	L	M	?	2007	-

DRAFT

Table 1. Master List of Potential Control Measures for 8-hour Ozone SIP (last modified July 20, 2005)

List #	Measure	Description	Emission Reduction Potential	Feasibility	Cost per Ton	Timeframe (2007 or 2009)	PM2.5 Co-Benefits
A 21	Control Fermentation Sources (wineries)	Reduce evaporative VOC emissions from the fermentation process at wineries.	L	M	?	2007	-
A 22	Control Fermentation Sources (breweries)	Reduce ethanol emissions from breweries.	L	M	?	2007	-
A 23	Control Industrial Incineration	Implement programs to reduce emissions from industrial incineration, including municipal waste, hazardous waste, sewage sludge incineration, and medical waste. Reduce emission limits.	L	M	M	2007	-
A 24	Control Wastewater Treatment Facilities	Require capture and control of VOC emissions from facilities treating industrial wastewater and domestic sewage. Adopt SCAQMD Rule 1176: Sumps and Wastewater Separators.	L	?	?	2007	-
A 25	Control VOC Emissions from Fuel Facilities	Reduce the VOC emission limits for bulk plants/terminal, including storage tanks. Adopt SCAQMD Rule 1178: Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities.	L	?	?	2007	-
A 26	Control VOC Content of Can Coatings and Lubricants	Reduce VOC limits in can coating products, include inks and lubricants.	L	?	?	2007	-
A 27	Control VOC Content of Adhesives and Sealants	Reduce VOC limits in Adhesive and Sealants rules to reflect advancements in technology.	L	?	?	2007	-
A 28	Control VOC Emissions from Construction and Maintenance	Reduce VOC emissions from roofing kettles.	L	?	?	2007	-
A 29	Enhanced Enforcement of Area Source Regs: Open Burning	Enhance enforcement of seasonal open burning restrictions.	L	L	M/H	2007	-
A 30	Enhanced Enforcement of Area Source Regs: Solvent Cleaning	Enhance enforcement of surface cleaning rules.	L	L	M/H	2007	-

DRAFT

Table 1. Master List of Potential Control Measures for 8-hour Ozone SIP (last modified July 20, 2005)

List #	Measure	Description	Emission Reduction Potential	Feasibility	Cost per Ton	Timeframe (2007 or 2009)	PM2.5 Co-Benefits
A 31	Control VOC Content of Marine Coating Products	Require VOC emission limits for marine coatings.	L	?	?	2007	-
A 32	Control VOC Content of Wood Coating Products	Reduce the VOC limits for Wood Products Coatings.	L	M	L	2007	-
A 33	Low-Emission Natural Gas Furnaces	Adopt SCAQMD Rule 1111: NOx Emissions from Natural Gas Fired, Fan-Type Central Furnaces (no more than 40 nanograms of NOx per joule of useful heat).	L	L	?	2007	-
A 34	Low-Emission Natural Gas Water Heaters	Adopt SCAQMD Rule 1121: Control of NOx from Residential Type Natural Gas Fired Water Heaters.	L	L	?	2007	-
A 35	Episodic limits on asphalt paving and traffic marking activities	Prohibit road paving and traffic marking on Air Quality Action days.	L	L	L	2007	-
A 36	No Fuel Policy on Code Red Days	Voluntary reduction in fueling activities on Code Red Days.	L	L	L	2007	-
A 37	Episodic Pesticide Application Ban	Ban pesticide application on Code Red Air Quality Action Days.	L	L	M/H	2007	-
A 38	Episodic Voluntary Pesticide Application Reduction	Encourage voluntary restrictions on pesticide application on Code Red Air Quality Action Days.	L	L	M/H	2007	-
A 39	Pesticide Application: Best Practices	Establish best practices for pesticide application.	M	L	L	2007	-
A 40	Clean Air Partners: Air Quality Action Days	Take a variety of actions on Code Red Days to reduce emissions and improve air quality (target lawnmowers, paints, refueling).	M	H	?	2005	-
A 41	Government Actions (Air Quality Action day similar to snow day)	Implement a liberal leave policy for local, state and federal employees on Code Red Air Quality Action Days, permitting employees to work from home or take unscheduled leave.	L	L	?	2007	-

DRAFT

Table 1. Master List of Potential Control Measures for 8-hour Ozone SIP (last modified July 20, 2005)

List #	Measure	Description	Emission Reduction Potential	Feasibility	Cost per Ton	Timeframe (2007 or 2009)	PM2.5 Co-Benefits
A 42	Clean Air Partners: Public Outreach and Education	Implement Strategic Communication Campaigns to Increase Public Awareness (target lawnmowers, paints, refueling).	L	H	?	2005	-
A 43	Local Government Education Campaign	Encourage local governments to adopt Code Red Air Quality Action Day policies (target lawnmowers, paints, refueling).	L	H	?	2005	-
A 44	Mass Marketing Campaign	Marketing effort involving business-to-business advertising campaign in print media and on world wide web.	L	H	?	2005	-
A 45	Public Outreach and Education: Fueling	Educate to improve fueling practices.	L	H	?	2005	-
A 46	Public Outreach and Education: Sources	Public Education on NOx and ROG sources in Schools and Small Businesses.	L	H	?	2005	-
A 47	Control Residential Wood Burning.	Implement program to reduce emissions from Wood-Burning Fireplaces and Wood Stoves.	L	L	?	2007	-
A 48	Control Upwind Port Emissions	Pursue approaches to reduce land based port emissions.	L	M	M/H	2006	-
A 49	Implement Programs to Reduce the Urban Heat Island Effect: Forestry.	Increase Urban Tree Canopy	L	L/M	?	2007	-
A 50	Implement Programs to Reduce the Urban Heat Island Effect: Roofs.	Green and Cool Roofs Projects	L	L/M	?	2007	-
A 51	Implement Programs to Reduce the Urban Heat Island Effect: Pavement.	Cool Pavement Projects	L	L/M	?	2007	-
A 52	Green Procurement Policy	Establish procurements policies that foster emission reduction.	L	M	?	2007	-
A 53	Enhanced Enforcement: Environmental Partnerships/Pollution Prevention Initiatives	Voluntary compliance audits, encourage low emitting technology (swap out solvent machines)	L	H	M	2006	-
							-
Non-road Sources							-

DRAFT

Table 1. Master List of Potential Control Measures for 8-hour Ozone SIP (last modified July 20, 2005)

List #	Measure	Description	Emission Reduction Potential	Feasibility	Cost per Ton	Timeframe (2007 or 2009)	PM2.5 Co-Benefits
N 1	Retrofit/Repower Locomotives	Provide financial incentives to retrofit or repower locomotives operating in the nonattainment area for cleaner burning diesel or alternative fuels.	L/M	H	?	2007	-
N 2	Locomotive Idling Reduction -- NOx	Support Installation of Idling Reduction Technologies on Locomotives.	L	H	L	2007	-
N 3	Airport Emission Cap	Establish Agreement with Airports Authority to Cap or Reduce Emissions.	M	H	M	2007	Yes
N 4	Airport Emissions Cap in Upwind Counties	Voluntary Agreement to Cap Airport Emissions Outside the Nonattainment Area.	L	L*/M	M	2007	Yes
N 5	Clean Air Maintenance Initiative: Road Maintenance Contracts	Develop alternative programs for state and local governments (public entities) to reduce on-road and off-road construction and maintenance related emissions. Episodic: no work or idling restrictions. Non-episodic: Control retrofits.	L	L	L (NOx) L/H (VO C)	2007	Yes
N 6	Clean Air Construction Initiative: Road Construction Projects	Develop alternative programs for state and local governments (public entities) to reduce on-road and off-road construction and maintenance related emissions. Episodic: no work or idling restrictions. Non-episodic: Control retrofits.	M	L	L (NOx) L/H (VO C)	2007	Yes
N 7	Clean Air Construction Initiative: Off-Road Construction Projects	Develop alternative programs for state and local governments (public entities) to reduce on-road and off-road construction and maintenance related emissions. Episodic: no work or idling restrictions. Non-episodic: Control retrofits.	M	L	L (NOx) L/H (VO C)	2007	Yes
N 8	Clean Air Construction Initiative: Preference for Low-emissions Industrial Equipment	In bids for government contracts, award extra points to bidders using low-emission industrial equipment.	L	M	L (NOx) L/H (VO C)	2007	Yes

DRAFT

Table 1. Master List of Potential Control Measures for 8-hour Ozone SIP (last modified July 20, 2005)

List #	Measure	Description	Emission Reduction Potential	Feasibility	Cost per Ton	Timeframe (2007 or 2009)	PM2.5 Co-Benefits
N 9	Locomotive Engine Standards	Encourage new federal locomotive engine emission standards (EPA 2012)	M	L	H	2012	Yes
N 10	Marine Diesel Engine Standards	Encourage new federal marine engine emission standards (EPA 2012).	L	L	H	2012	Yes
N 11	High Cetane Fuel	Require High Cetane Diesel Fuel for Off-road Vehicles.	M	L	H	2009	-
N 12	Biodiesel for Off-Road Equipment	Require all off-road diesel equipment to burn biodiesel during ozone season.	L	L	?	2007	-
N 13	Episodic Restrictions on Lawn & Garden Equipment (mandatory)	Restrict use of lawn and garden equipment during Code Red Air Quality Action days.	L	L	L	2007	-
N 14	Episodic Restrictions on Recreational Equipment Use (mandatory)	Restrict use of recreational equipment during Code Red Air Quality Action days.	L	L	L	2007	-
N 15	Episodic Restrictions on Use of Commercial and Industrial Equipment (mandatory)	Restrict use of industrial equipment during Code Red Air Quality Action Days.	L	L	L	2007	-
N 16	Episodic Commercial Lawn & Garden Equipment Use Restrictions (voluntary)	Encourage restricted use of commercial lawn and garden equipment on Code Red Air Quality Action Days.	L	L	L	2007	-
N 17	Episodic Residential Lawn & Garden Equipment Use Restrictions (voluntary)	Encourage restricted use of residential lawn & garden equipment on Code Red Air Quality Action Days.	L	L	L	2007	-
N 18	Episodic Commercial and Industrial Equipment Use Restrictions (voluntary)	Encourage restricted use of commercial and industrial equipment during Code Red Air Quality Action Days.	L	L	L	2007	-
N 19	Episodic No Mow Policy on Code Red Days (voluntary)	Voluntary reduction in mowing on Code Red Days.	L	L	L	2007	-
N 20	Control Off-Road Diesel Engines	Implement smoke testing program for heavy-duty (>50 hp) off-road diesel engines.	L (NOX) M/H (PM)	L	M	2009	Yes

DRAFT

Table 1. Master List of Potential Control Measures for 8-hour Ozone SIP (last modified July 20, 2005)

List #	Measure	Description	Emission Reduction Potential	Feasibility	Cost per Ton	Timeframe (2007 or 2009)	PM2.5 Co-Benefits
N 21	Control Off-Road Diesel Engines	Encourage the use of engines that participate in EPA's voluntary "Blue Sky Series" engine program.	L	M	M	2007	-
N 22	Control Spark Ignition Engines	Retrofit controls and 3-way catalyst for spark ignition engines.	L	L	H	2007	-
N 23	"Cash for Clunkers" 2-cycle Engines	Implement a 2-cycle Engine Replacement Program.	L	M	H	2005	-
N 24	"Cash for Clunkers" Lawn & Garden Equipment	Offer cash for consumers to turn in lawnmowers or lawn tractors and purchase electric or push mowers.	L	M	H	2005	-
N 25	"Cash for Clunkers" Outboard Motors	Offer cash for consumers to turn in old outboard motors and purchase new ones.	L	M	H	2005	-
N 26	"Cash for Clunkers" Recreational Equipment Program	Offer small cash reward for owners to turn in old, high-emission recreational equipment.	L	M	H	2005	-
N 27	Idling restrictions for lawn & garden equipment	Limit idling by commercial lawn & garden equipment.	L	L	H	2007	-
N 28	Control Emissions from Lawn and Garden Equipment	Adopt measures to reduce lawn area and mower usage. Xeriscaping.	L	M	L	2007	-
N 29	Agricultural equipment retrofits	Require agricultural equipment to be retrofitted with emissions controls.	L	?	?	2007	-
N 30	Agricultural Equipment Use Restrictions	Ban use of agricultural equipment on Code Red Air Quality Action Days.	L	?	?	2007	-
N 31	Agricultural Equipment Use Restrictions	Voluntary moratorium on use of agricultural equipment on Code Red Air Quality Action Days.	L	?	?	2007	-
N 32	Agricultural equipment use restrictions	Mandatory restrictions on use of agricultural equipment during Code Red Air Quality Action Days.	L	?	?	2007	-
N 33	Low-emissions agricultural equipment	Require sale of low-emissions agricultural equipment in region.	L	?	?	2007	-

DRAFT

Table 1. Master List of Potential Control Measures for 8-hour Ozone SIP (last modified July 20, 2005)

List #	Measure	Description	Emission Reduction Potential	Feasibility	Cost per Ton	Timeframe (2007 or 2009)	PM2.5 Co-Benefits
N 34	Industrial equipment replacement	Subsidize replacement of fossil-fuel fired industrial equipment with electric industrial equipment.	L	?	?	2007	-
N 35	Industrial equipment retrofits	Require industrial equipment to be retrofitted with emissions controls.	L	?	?	2007	-
N 36	Low-emissions industrial equipment	Require sale of low-emissions industrial equipment in region.	L	?	?	2007	-
N 37	Idling restrictions for industrial equipment	Limit idling by industrial equipment.	L	?	?	2007	-
N 38	Control Construction Emissions	Limitations and Fleet Rules for Construction Equipment.	M	M	H	2007	Yes
N 39	Light commercial equipment retrofits	Require light commercial equipment to be retrofitted with emissions controls.	L	?	?	2007	-
N 40	Control Light Commercial Equipment	Require zero emission forklifts where feasible.	L	?	?	2007	-
N 41	Control Light Commercial Equipment	Retrofit portable engine and generators.	L	?	?	2007	-
N 42	Recreational equipment retrofits	Require recreational equipment to be retrofitted with particulate filter and/or oxidation catalysts.	L	L	?	2007	-
N 43	Episodic Recreational Marine Equipment Use Restrictions (mandatory)	Ban use of recreational marine equipment on Code Red Air Quality Action Days.	L	L	H	2007	-
N 44	Episodic Recreational Marine Equipment Use Restrictions (voluntary)	Encourage restricted use of all recreational marine equipment on Air Quality Action Days.	L	L	H	2007	-
N 45	Episodic Recreational Marine Idling Restrictions (mandatory)	Ban idling by recreational marine equipment on Code Red Air Quality Action Days.	L	L	H	2007	-
N 46	Episodic Recreational Marine Idling Restrictions (voluntary)	Encourage reduced idling by recreational marine equipment on Air Quality Action Days.	L	L	H	2007	-

DRAFT

Table 1. Master List of Potential Control Measures for 8-hour Ozone SIP (last modified July 20, 2005)

List #	Measure	Description	Emission Reduction Potential	Feasibility	Cost per Ton	Timeframe (2007 or 2009)	PM2.5 Co-Benefits
N 47	Episodic Recreational Marine Idling Restrictions (mandatory)	Ban idling by recreational marine equipment during ozone season.	L	L	H	2007	-
N 48	Recreational Marine Idling Restrictions	Ban idling by recreational marine equipment year-round.	L	L	H	2007	-
N 49	Control Recreational Marine Emissions	Provide incentives for newer boats and engines.	L	L	H	2007	-
N 50	Control Recreational Equipment Emissions	Increase registration fee on recreational vehicles (dedicate fee to clear air).	L	L	H	2007	-
N 51	Control Commercial Marine Sources	Tug/Push Boat Activity Reductions.	L	L	H	2007	Yes
N 52	Control Upwind Port Emissions	Emission Fee Program for Port-Related Mobile Sources	L	L	H	2007	Yes
N 53	Graduated registration fees for recreational boats	Levee additional registration fee for registration of boats with old, high-emission engines.	L	L	H	2007	-
N 54	Low NOx Fuel for Lawn & Garden Equipment	Require diesel-fired lawn & garden equipment to use low-NOx fuel additives during ozone season.	L	L	?	2007	-
N 55	Low NOx Fuel for Recreational Marine Equipment	Require diesel-fired recreational marine equipment to use low-NOx fuel additives during ozone season.	L	L	?	2007	-
N 56	Require low-NOx fuel for airport GSE	Require airport GSE to use low-NOx fuel additives during ozone season.	L	L	?	2007	-
N 57	Require low-NOx fuel for industrial equipment	Require industrial equipment to use low-NOx fuel additives during ozone season.	L	L	?	2007	-
N 58	Require low-NOx fuel for light commercial equipment	Require light commercial equipment to use low-NOx fuel during ozone season, if applicable.	L	L	?	2007	-
N 59	Episodic Low-NOx Fuel for Construction Equipment	Require diesel-fired construction equipment operating in region to use low-NOx fuel additives during ozone season.	L	L	?	2007	-

DRAFT

Table 1. Master List of Potential Control Measures for 8-hour Ozone SIP (last modified July 20, 2005)

List #	Measure	Description	Emission Reduction Potential	Feasibility	Cost per Ton	Timeframe (2007 or 2009)	PM2.5 Co-Benefits
N 60	Episodic Low-NOx Fuel for Construction Equipment	Require diesel-fired construction equipment operating on state or local government contracts to use low-NOx fuel additives during ozone season.	L	L	?	2007	-
N 61	Episodic Low-NOx Fuel for Construction Equipment	Voluntary use of low-NOx fuel additives by diesel-fired construction equipment during ozone season.	L	L	?	2007	-
N 62	Airport Congestion Pricing	Charge higher aircraft landing fees during busy times of day to reduce airport delays and congestion.	L	L	?	2009	-
N 63	Gas Tax Increase	Implement a fuel tax on off-road gasoline.	L	L	?	2009	-
N 64	Diesel Tax Increase	Implement a fuel tax on off-road diesel.	L	L	?	2009	-
N 65	Require low-NOx fuel for recreational equipment	Require recreational equipment to use low-NOx fuel additives during ozone season.	L	L	?	2007	-
							-
Mobile Sources							
M 1	CAL LEV II Standards	Adopt CAL LEV II Standards, which will require increased zero emission vehicles with marginal VOC and CO2 reductions in 2010.	L	L	M	2010	-
M 2	Expand Remote Sensing Program	Expand the Adoption of a Remote Sensing Program to DC and MD.	L	M	M	2007	-
M 3	OTC Corridor Strategy	Implement Truck Stop electrification projects and Heavy-Duty Engine Engine Control Module (ECM) Recalibration (chip reflash) along the I-95 corridor.	M	H	M	2007	Yes
M 3	Clean Vehicle Purchase Program: State and Local Fleets	Accelerate Adoption of Alternative Fueled Vehicles, including Hybrids. Focus on state and local fleets.	L	M	H	2007	-
M 4	Clean Vehicle Purchase Program: Private Owners Fleet	Accelerate Adoption of Clean Vehicles. Consider Use of Tax Incentives.	L	M	H	2007	-

DRAFT

Table 1. Master List of Potential Control Measures for 8-hour Ozone SIP (last modified July 20, 2005)

List #	Measure	Description	Emission Reduction Potential	Feasibility	Cost per Ton	Timeframe (2007 or 2009)	PM2.5 Co-Benefits
M 5	Clean Vehicle Purchase Program: Buses	Accelerate Adoption of Clean Vehicles. Consider CNG Buses instead of new diesel.	M	M	H	2007	-
M 6	Clean Fuels Program: CNG Fueling Stations for DC Metro Region	Build new modular CNG fueling stations.	L	M	H	2007	-
M 7	Clean Vehicle Purchase Program: Refuse Haulers	Accelerate Adoption of Clean Vehicles. Consider CNG refuse haulers instead of new diesel.	M	M	H	2007	-
M 8	Clean Vehicle Purchase Program: Rental Cars	Accelerate Adoption of Clean Vehicles. Target rental car fleets.	L	L	H	2007	-
M 9	Clean Vehicle Purchase Program: Taxicabs	Accelerate Adoption of Clean Vehicles. Target taxicab fleets.	L	L	H	2007	-
M 10	Diesel Retrofit Program: School Buses	Retrofit diesel school buses.	M	H	H	2005	Yes
M 11	Diesel Retrofit Program: State Vehicles	Retrofit diesel state vehicles.	M	H	H	2005 PM/2008 NOx	Yes
M 12	Diesel Retrofit Program: Local Vehicles	Retrofit diesel local vehicles.	L/M	H	H	2005 PM/2008 NOx	Yes
M 13	Diesel Retrofit Program: Commercial Vehicles	Retrofit diesel commercial vehicles.	L/M	H	H	2005 PM/2008 NOx	Yes
M 14	Diesel Retrofit Program: International Green Diesel Retrofit	Fit transit buses running on ultra low sulfur diesel with a quad-catalytic filter.	M	M	H	2007	Yes
M 15	Rebate for Purchase of Hybrid Vehicles	Issue rebate for purchase and registration of hybrid vehicles.	L	H	H	2007	-
M 16	Zero I/M waivers and exemptions	Eliminate all waivers and exemptions in the I/M program.	L	L	L	2007	-
M 17	Fleet ILEV for light-duty gasoline vehicles	Require fleets operating in nonattainment area to be comprised of a percentage of ILEV vehicles.	L	M	H	2007	-
M 18	Expand I/M Requirements to Upwind Counties	Expand Inspection and Maintenance Requirements.	M/H	L	M	2007	-

DRAFT

Table 1. Master List of Potential Control Measures for 8-hour Ozone SIP (last modified July 20, 2005)

List #	Measure	Description	Emission Reduction Potential	Feasibility	Cost per Ton	Timeframe (2007 or 2009)	PM2.5 Co-Benefits
M 19	Control Vehicle Idling	No Idling Rule – Restriction. Limits idling to 5 minutes for all non commercial, consumer operated vehicles within the Washington NAA. Establish exemptions where required.	L	M	H	2007	-
M 20	Enhanced Enforcement of Mobile Source Regulations	Increase smoking vehicle enforcement.	L	H	H	2005	-
M 21	Enhanced Enforcement: Bus and Truck Idling	Step-up enforcement of existing regulations to prevent extended bus and truck idling.	L	M	M	2007	Yes
M 22	Enhanced Enforcement: On-road Idling	Increase enforcement of regional idling restrictions for on-road vehicles.	L	M	M	2007	-
M 23	Enhanced Enforcement: Speed Limits	Increase speed limit enforcement on portions of the freeway system where speeding is a problem so that more vehicles are traveling at or below the posted limit.	L	M	H	2007	-
M 24	Vehicle Share Programs: Transit Stations	Develop a transit station car/low emission vehicle share program.	L	H	H	2005	-
M 25	Vehicle Share Programs: Neighborhoods	Implement a neighborhood electric vehicle share program.	L	L	H	2005	-
M 26	On-road Heavy-Duty Diesel Smoke Testing and I/M Program	Implement a smoke testing and/or Inspection/Maintenance Program for On-road Heavy-duty Diesel Engines.	L (NOX) M/H (PM)	M	M	2008	Yes
M 27	Control Bus Emissions	Provide electrified parking spaces for tour buses.	L	M	L	2007	-
M 28	Control Delivery Truck Emissions	Establish voluntary emission reduction program with delivery fleets.	L	M	H	2007	-
M 29	Car Sharing Program	Fund incentives for new car sharing customers (i.e., Flexcar or Zipcar services).	L	H	H	2007	-
M 30	"Cash for Clunkers" On-Road Vehicles	Fund voluntary program paying car owners to turn in old vehicles for scrappage. Target pre-1980 vehicles with minimal/no emissions control.	L	M	H	2007	-

DRAFT

Table 1. Master List of Potential Control Measures for 8-hour Ozone SIP (last modified July 20, 2005)

List #	Measure	Description	Emission Reduction Potential	Feasibility	Cost per Ton	Timeframe (2007 or 2009)	PM2.5 Co-Benefits
M 31	"Cash for Clunkers" Early Bus Engine Replacement	Replaces high-polluting diesel engines in WMATA buses with new diesel engines.	L/M	M	H	2007	-
M 32	"Cash for Clunkers" Taxicab Replacement - Conventional Vehicles	Replace taxicabs with new "conventional" LDGVs.	L/M	M	M/H	2007	-
M 33	Control Vehicle Technology	Install systems on gasoline vehicles to reduce emissions (e.g., Bose high-speed centrifugal separation system).	L	M	M	2007	-
M 34	Annual Gasoline Vehicle Pollution Fee	Levy an annual fee on petroleum-powered vehicles based on mileage driven and emission rates (odometer tax).	L	L	H	2007	-
M 35	VMT-Based Car Tax	Charge VMT fee for all vehicles registered or garaged in the region.	L	L	?	2007	-
M 36	Graduated Car Tax: Additional Vehicles	Charge higher car tax on each additional vehicle registered by a household.	L	L	?	2007	-
M 37	Graduated Car Tax: Miles Per Gallon	Charge graduated car taxes based on a vehicle's EPA miles per gallon rating.	L	L	?	2007	-
M 38	Graduated Car Tax: Petroleum-Based Vehicles only	Implement region-wide car tax for petroleum-fueled vehicles.	L	L	?	2008	-
M 39	Graduated Vehicle Registration Fee Based on Number of Vehicles	Assess graduated vehicle registration fee/car tax on every privately owned vehicle in the region. Households with multiple vehicles pay higher tax on each additional vehicle.	L	L	?	2007	-
M 40	Pay-as-you-drive auto insurance (\$/gal)	Offer auto insurance rates linked to number of gallons of fuel consumed by vehicle.	L	L	?	2007	-
M 41	Control VOC Content of Automotive Products	Windshield Wiper Fluid – lower VOC. Establish evaporative standards that are lower than those set by the EPA – 35 weight-percent VOC.	L	L	H	2007	-
M 42	Gasoline Engine Retrofit Program	Retrofit with 3-way catalysts on gasoline-burning heavy duty trucks that currently have 2-way catalysts or no catalysts.	L	?	?	2006	-

DRAFT

Table 1. Master List of Potential Control Measures for 8-hour Ozone SIP (last modified July 20, 2005)

List #	Measure	Description	Emission Reduction Potential	Feasibility	Cost per Ton	Timeframe (2007 or 2009)	PM2.5 Co-Benefits
M 43	Motorcycle I/M Program	End the motorcycle smog check exemption.	L	M	H	2007	-
M 44	"Cash for Clunkers" Gas Caps Program	Provide free replacement gas caps to light- and medium-duty vehicle owners.	L	H	H	2005	-
M 45	Mobile Source Mitigation Fees: Vehicle Garage	Collect a fee from each homeowner with a vehicle garage.	L	L	H	2007	-
M 46	Mobile Source Mitigation Fees: Ozone Season VMT Surcharge	Require a surcharge to be paid by drivers during the summer season based on the number of driving miles.	L	L	H	2007	-
M 47	Electric Vehicle Tax Incentives	Establish incentives to purchase electric vehicles.	L	L	H	2007	-
M 48	Truck Idling Reduction: Truck Stop Electrification (TSE)	Implement Projects to Electrify Truck Stops.	L	H	M	2007	-
M 49	Truck Idling Reduction: Auxilliary Power Units (APU)	Increase Market Penetration of APUs to Reduce Truck Idling.	L	H	H	2007	-
M 50	Improve Truck Fleet Efficiency	Encourage Adoption of Technologies that Increase Truck Fleet Efficiency.	L	M	H	2007	-
M 51	Increase Intermodal Transport	Increase Use of Intermodal Options for Transporting Goods.	L	M	H	2007	-
M 52	Control Heavy Duty Diesel Engines	Heavy-Duty Engine Engine Control Module (ECM) Recalibration (chip reflash).	L	L	?	2005	Yes
M 53	Augment Diesel I/M Program	Augment truck and bus inspections with community-based inspections.	L	L	H	2007	Yes
M 54	Ban Vehicles from Downtown Streets	Restrict private vehicle use in certain downtown areas during business hours, encouraging pedestrian and bicycle use instead.	L/M	L	M	2007	-
M 55	Biodiesel Fuel	Expand use of biodiesel fuel for on-road vehicles.	L	M	H	2007	-
M 56	CARB Diesel Fuel	Implement CARB diesel fuel standards.	L/M	M	M	2009	-
M 57	High Cetane Fuel	Require High Cetane Diesel Fuel for On-road Vehicles.	L	L/M	H	2009	-

DRAFT

Table 1. Master List of Potential Control Measures for 8-hour Ozone SIP (last modified July 20, 2005)

List #	Measure	Description	Emission Reduction Potential	Feasibility	Cost per Ton	Timeframe (2007 or 2009)	PM2.5 Co-Benefits
M 58	Low-NOx Diesel Fuel	Require regional use of low-NOx fuel additives for on-road diesel vehicles	L	?	?	2007	-
M 59	Low-NOx On-Road Diesel Fuel in Ozone Season	Require use of low-NOx additive in on-road diesel fuel during ozone season.	L	?	?	2007	-
M 60	Low-NOx On-Road Diesel Fuel in Ozone Season	Require use of low-NOx additive by state or local diesel vehicles during ozone season.	L	?	?	2007	-
M 61	Fuel Additives to Reduce Emissions	Use emulsified diesel fuel in diesel-burning heavy duty vehicles.	L	M	?	2005	-
M 62	Gas Tax Increase	Implement a fuel tax on on-road gasoline.	L	L	?	2007	-
M 63	Diesel Tax Increase	Implement a fuel tax on on-road diesel.	L	L	?	2007	-
M 64	Expand HOV Network on the Freeway System	Construct additional HOV lanes on regional freeways.	L	H	H	2009+	-
M 65	Manage Roadway Usage: CAPCOM	Regional Travel Information System/Driver Assistance. Enhance real time traffic information to allow drivers to make better decisions about when and where to travel. CAPCOM.	L	M	H	2009	-
M 66	Replace Traffic Signals with Lesser Controls	Install roundabouts in place of signals at low volume intersections.	L	L	H	2007	-
M 67	Signals to Flashing Yellow 12am-5am	From midnight until 5am, set intersection signals to flashing yellow in predominant direction and flashing red in minor direction for all low volume intersections where safety permits.	L	M	H	2007	-
M 68	Traffic Signal Optimization	Regularly optimize traffic signals to reduce idling and low-speed emissions.	L	H	H	2007	-
M 69	Build Park & Ride Lots at Major Intersections of Commuter Highways	Construct new park & ride commuter lots along HOV facilities.	L	H	H	2007	-

DRAFT

Table 1. Master List of Potential Control Measures for 8-hour Ozone SIP (last modified July 20, 2005)

List #	Measure	Description	Emission Reduction Potential	Feasibility	Cost per Ton	Timeframe (2007 or 2009)	PM2.5 Co-Benefits
M 70	Extend Ramp Metering	Install signals to control flow of vehicles at selected freeway ramp entrances to maintain level of service.	L	M	H	2007	-
M 71	Permit Right Turn on Red	Reduce vehicle idling time by permitting right turn on red, where safety allows.	L	M	H	2007	-
M 72	Manage Roadway Usage: No Drive Days	Odd/Even License Plate no Drive Days. Prohibit drivers from traveling during certain periods, based on vehicle tags or other easily identifiable criteria. Can be a permanent or episodic control.	M	L	H	2007	-
M 73	Congestion Pricing on Low Occupancy Vehicles	Impose a fee on vehicles containing two or fewer persons that use designated roadways during the peak AM period.	L	L	H	2007	-
M 74	Value Pricing (HOT lanes)	Implement value pricing strategies on busy freeways during rush hour.	L	H	H	2007	-
M 75	Value Pricing	Restricted Access/ "Green Curb". Differential fees and access permits applied on roads, tunnels, bridges and delivery/loading zones during periods of high congestion.	L	L	H	2007	-
M 76	Mobile Source Mitigation Fees: Entry Fees	Collect fees and tolls from drivers to use roads or enter areas.	L	M	H	2007	-
M 77	Transportation Funding Initiatives	Require that Congestion Mitigation Air Quality (CMAQ) funds be used only for projects that significantly improve air quality.	L	L	?	2007	-
M 78	Establish Clean Air Fund	Sell Clean Air License Plates to fund air quality programs (similar to "Save the Bay" tags).	L	M	?	2007	-
M 79	Electronic Tolling	Expand interoperability of electronic tolling.	L	H	L	2005	-
M 80	Control Vehicle Speeds: Automated Enforcement	Automate speed enforcement and lower the speed limit to 55 mph for heavy duty vehicles.	L	M	H	2007	-

DRAFT

Table 1. Master List of Potential Control Measures for 8-hour Ozone SIP (last modified July 20, 2005)

List #	Measure	Description	Emission Reduction Potential	Feasibility	Cost per Ton	Timeframe (2007 or 2009)	PM2.5 Co-Benefits
M 81	Control Vehicle Speeds: Lower Limits	Speed Limit Restriction: Regional speed limit of 55 mph on all roads which previously had posted speeds of greater than 55 mph.	L	M	L	2007	-
M 82	Manage Roadway Usage: Dedicated Bus Lanes	Dedicate roadway lanes for use by buses.	L	M	H	2009	-
M 83	Convenience Commercial Centers in Residential Areas	Change zoning ordinances to allow neighborhood-serving retail establishments in residential areas.	L	M	H	2007	-
M 84	Incentives for Mixed Use at Transit Centers	Include incentives for mixed-use development at transit centers to reduce sprawl and VMT.	M	H	H	2007	-
M 85	Control Growth and Development	Encourage mixed-use development.	L	M	?	2006	-
M 86	Infill Development	Implement an infill development program throughout the Washington region.	L	M	M	2007	-
M 87	Proximity Commute: Job Swap	Encourage employees of the same firm to swap jobs, permitting each to work at a location closer to home.	L	H	L	2007	-
M 88	Proximity Commuting: Live Near Your Work	Provides financial incentives to homebuyers moving to designated neighborhoods near their workplaces.	L	H	H	2007	-
M 89	Shorter Distance from Buildings to Bus Stops	For existing buildings, re-route traffic to allow buses to come closer to the building. For new buildings, alter setback requirements to allow closer bus access.	L	L	H	2007	-
M 90	Smart Growth and Infill Development Programs	Encourage development/redevelopment of land in designated growth areas, encouraging local governments to place greater emphasis on land development near transit stations.	M	L	H	2007	-

DRAFT

Table 1. Master List of Potential Control Measures for 8-hour Ozone SIP (last modified July 20, 2005)

List #	Measure	Description	Emission Reduction Potential	Feasibility	Cost per Ton	Timeframe (2007 or 2009)	PM2.5 Co-Benefits
M 91	Smart Growth Development	Implement a Smart Growth program throughout the Washington region.	M	L	H	2007	-
M 92	Telecommuting Centers and Telework Program	Telecommuting centers, including marketing activity, consultant support, commuter and employer information and assistance.	L	H	H	2007	-
M 93	Telecourses at Local Colleges and Universities	Encourage local colleges and universities to offer telecourses to reduce vehicle trips.	L	M	H	2007	-
M 94	Restrict Construction of New Parking	Restrict construction of new parking at employment centers based on distance from transit and urban core.	L	L	H	2007	-
M 95	ATM Machines Installed at Metro Stations	Install ATMs near metro stations for rider convenience.	L	H	H	2007	-
M 96	Automatic Bus Locator System	System would provide bus location information to WMATA dispatchers. This would decrease wait time and improve on-time arrival/departure.	L	H	H	2007	-
M 97	Clean Commute/Try Transit Week	Promotes use of alternative transportation, including transit, by daily commuters for one week per year.	L	H	H	2007	-
M 98	College 33 Pass System	Expand Baltimore college bus fare program to DC area. Program allows students to receive reduced fares near 19 participating schools in the region.	L	H	H	2007	-
M 99	Discount Multi-Trip Bus Fares	Introduce discount programs reducing cost of multiple bus rides through purchase of pass books (e.g. 10-trip tickets).	L	H	H	2007	-
M 100	Additional Transit Stores	Establish additional stationary transit stores in the region.	L	M	H	2007	-
M 101	Subsidize Transit Usage	Expand Metro Check to all County Employees	L	M	H	2007	-
M 102	Expand Peak Period Metrorail Service	Extend peak-period service on Metrorail so trains run at 6 minute frequency from 6-11 am and 3-8 pm.	L	L	H	2007	-

DRAFT

Table 1. Master List of Potential Control Measures for 8-hour Ozone SIP (last modified July 20, 2005)

List #	Measure	Description	Emission Reduction Potential	Feasibility	Cost per Ton	Timeframe (2007 or 2009)	PM2.5 Co-Benefits
M 103	Expand VRE Train Service	Expand VRE train service to include additional departures.	L	L	H	2007	-
M 104	Expand WMATA Fleet with Hybrid-Electric Buses	Purchase hybrid electric buses instead of clean diesel as part of WMATA fleet expansion.	L	M	H	2007	-
M 105	Express Buses From Outlying Areas	Implement direct bus service from outlying Park & Ride lots and far suburbs to major work centers.	L	M	H	2007	-
M 106	Express Reverse Commuter Buses	Implement reverse commute express buses from the District to major outlying work centers.	L	M	H	2007	-
M 107	Flat Fare For All Transit Trips	Single price all public transit services with a flat \$1.10 fare and free transfers all day, 7 days per week.	L	L	H	2007	-
M 108	Free Bus Service Off-Peak	Institute free off-peak bus service from 10-2 on weekdays and all day on weekends.	L	L	H	2007	-
M 109	Free bus-to-rail / rail-to-bus transfers	Institute free bus-to-rail transfer similar to free rail-to-bus transfer currently in place.	L	L	H	2007	-
M 110	Free Rail Use 10-3	Free Metrorail trips for all riders from 10AM-3PM on weekdays.	L	L	H	2007	-
M 111	Free Transit Passes to Students	Free transit passes for high school and college students, subsidized by schools or through student registration fee.	L	L	H	2007	-
M 112	Half Price Fares on Feeder Bus Service	All metro bus and local bus services to Metrorail and commuter rail stations reduce fares by half.	L	L	H	2007	-
M 113	Increase Commuter Rail Frequency	Increase frequency of MARC service to every 15 minutes on Penn and Camden lines and every 10 min on the Brunswick line. Increase VRE frequency to every 15 minutes.	L	L	H	2007	-
M 114	Metrorail Feeder Bus Service & Fare Buydown	Improve Metrorail feeder bus service at underutilized park & ride lots, implement fare buydown program.	L	L	H	2007	-

DRAFT

Table 1. Master List of Potential Control Measures for 8-hour Ozone SIP (last modified July 20, 2005)

List #	Measure	Description	Emission Reduction Potential	Feasibility	Cost per Ton	Timeframe (2007 or 2009)	PM2.5 Co-Benefits
M 115	New MARC Coaches	Purchase additional coaches for MARC to accommodate increased ridership.	L	M	H	2007	-
M 116	New Surface Parking at Transit Centers	Add new parking spaces at transit centers (bus, Metrorail, MARC) parking lots.	L	L	H	2007	-
M 117	Provide Additional Transit Service	Increase funding for transit services to expand core service.	L	L	H	2007	-
M 118	Provide Additional Transit Service Access	Increase funding for enhancing access to transit services.	L	M	H	2007	-
M 119	Real-Time Bus Schedule Information	Expand trials of real-time bus schedule information to local transit providers.	L	H	H	2007	-
M 120	Reduce Parking Fees at Facilities Outside the Beltway Adjacent to Metro	Reduce parking fees at Metro parking facilities or county/city managed facilities outside of the Beltway that are located near Metro stations.	L	M	H	2007	-
M 121	Regional Bus Service Expansion	Expansion of Metrobus and other regional bus services.	L	M	H	2007	-
M 122	Support Rail to Dulles Airport	Provide funding to expand rail services to Dulles Airport.	-	-	-	-	-
M 123	Transit Prioritization -- Queue Jumps	Provide queue jumps for buses at over-capacity signalized intersections throughout the region. Queue jumps allow buses to use a shoulder or other designated lane to bypass intersection queues and move forward towards the stop line.	L	M	H	2007	-
M 124	Universal Transportation Access (MD + WMATA)	SmarTrip card will allow users to pay fares on all rail and bus systems in the region (including parking in Metrorail lots) using one electronic card.	L	M	H	2007	-
M 125	WMATA Bus Information Displays with Maps	Install additional information boxes with maps and schedule information. Would include schedules in languages other than English in neighborhoods where most residents speak another language.	L	M	H	2007	-

DRAFT

Table 1. Master List of Potential Control Measures for 8-hour Ozone SIP (last modified July 20, 2005)

List #	Measure	Description	Emission Reduction Potential	Feasibility	Cost per Ton	Timeframe (2007 or 2009)	PM2.5 Co-Benefits
M 126	Rush Hour Shift	Shift Metrorail AM and PM rush hours to start 30 min earlier and end 30 min earlier.	L	M	H	2007	-
M 127	Employer Metro Shuttle Bus Services	Provide incentives for businesses to provide employee shuttle service to the nearest rail or transit stop.	L	M	H	2007	-
M 128	Eliminate or Restrict Airport Parking	Eliminate airport parking and replace with alternative fuel shuttle buses.	L	L	H	2007	-
M 129	Bicycle Racks in DC	Install bicycle racks at various locations throughout the region.	L	H	H	2007	-
M 130	Bike Lockers at Metro Stations, Park & Ride Lots, Other Locations	Expand existing bike lockers at Metrorail stations, install bicycle storage spaces in parking lots.	L	H	H	2007	-
M 131	Bike Racks on Transit Buses	Provide external bike racks on WMATA and other local transit buses.	L	H	H	2007	-
M 132	Bike/Pedestrian Paths	Fund construction of additional bicycle/pedestrian paths in the region.	L	H	H	2007	-
M 133	Employers Provide Free Bicycles for Middy Use	Require employers to provide one bicycle per 50 employees for mid-day business or personal use.	L	M	H	2007	-
M 134	Bike to Work Day	Conduct a one-day bike to work event. Provide outreach activities, education on the bike-to-work option, and assistance in trying bike-to-work.	L	H	H	2007	-
M 135	Safe Routes to School Program	Implement a safe pedestrian and bicycle routes to school program to reduce VMT.	L	H	H	2007	-
M 136	Improvements to Bicycle and Pedestrian Access	Provide incentives to developments that speed improvements to bicycle/pedestrian access. This includes improvements to sidewalks, curb ramps, crosswalks, lighting, etc.	L	M	H	2007	-
M 137	Enhance Pedestrian Facilities	Improve pedestrian facilities throughout region (e.g., Richmond Highway Corridor).	L	H	H	2007	-

DRAFT

Table 1. Master List of Potential Control Measures for 8-hour Ozone SIP (last modified July 20, 2005)

List #	Measure	Description	Emission Reduction Potential	Feasibility	Cost per Ton	Timeframe (2007 or 2009)	PM2.5 Co-Benefits
M 138	Mobile Commuter Stores	Fund mobile commuter stores in suburban commercial areas.	L	M	H	2007	-
M 139	4 Day Work Week/Flexible Work Schedules	Encourage employers to adopt a shorter work week, with employees working 4 10-hour days.	L	H	H	2007	-
M 140	Access to Jobs Program	Identifies gaps in transit service between places of residence and places of work for low wage workers.	L	M	H	2007	-
M 141	Mandatory Employee Commute Reduction	Mandatory employer trip reduction to reduce employee vehicle trips.	M	L	H	2007	-
M 142	Control Parking at Schools	Restrict high school students from driving to and parking at high schools when bus service is available.	L	M	H	2007	-
M 143	Student & staff based college & university rideshare programs	Create rideshare program focused on students and staff at regional universities.	L	H	H	2007	-
M 144	Vanpool Insurance	Establish a special risk pool to underwrite the cost of vanpool insurance.	L	M	H	2007	-
M 145	Vanpool Programs	Create programs and incentives designed to increase the number of vanpools in the region.	L	H	H	2007	-
M 146	Commuter Parking Tax: Employees	Implement daily tax on employees using commuter parking spaces.	L	L	?	2007	-
M 147	Commuter Parking Tax: Employers with No Discounted Commuter Parking Spaces	Implement daily tax on employers providing free or discounted commuter parking spaces.	L	L	?	2007	-
M 148	Commuter Parking Tax: Employers with No Transit Benefits	Implement daily tax on employers who do not provide transit benefits to employees.	L	L	?	2007	-
M 149	Market Based Parking Charge at Federal Facilities	Negotiate agreement with federal government to charge market rate for daily parking for all employees.	L	L	?	2007	-
M 150	Parking Impact Fee: All Parking	Levy annual impact fee on every parking space in nonattainment area.	L	L	?	2007	-

DRAFT

Table 1. Master List of Potential Control Measures for 8-hour Ozone SIP (last modified July 20, 2005)

List #	Measure	Description	Emission Reduction Potential	Feasibility	Cost per Ton	Timeframe (2007 or 2009)	PM2.5 Co-Benefits
M 151	Parking Impact Fee: Commuter Parking	Levy an annual fee on every commuter parking space in the Washington nonattainment area.	L	L	?	2007	-
M 152	Tax Parking Spaces Above Code Minimum	Discourage developers from providing parking in excess of code minimum by imposing a graduated tax on excess spaces.	L	L	H	2007	-
M 153	Episodic Parking Fee Increases	Increase fees for parking garages and meter during episodes.	L	L	H	2007	-
M 154	Control Parking for Carpools and Vanpools	Provide free parking for carpoolers and commuter vans.	L	M	H	2007	-
M 155	Free Parking for Carpools/Vanpools	Provide free reserved parking spaces for all carpools or vanpools.	L	M	H	2007	-
M 156	Employer Parking Cash-Out: Voluntary	Implement voluntary program encouraging employers to provide the value of subsidized parking to employees who use alternative commute strategies.	L	M	H	2007	-
M 157	Employer Parking Cash-Out: Mandatory	Implement program requiring employers to provide the value of subsidized parking to employees who use alternative commute strategies.	L	L	H	2007	-
M 158	Remove Trash Trucks From Area Streets	Reduce use of trash trucks through transport of trash by barge.	?	?	?	?	-
M 159	Clean Air Partners: Ozone Action Days	Take a variety of actions on Code Red Days to reduce emissions and improve air quality (free transit, telework, carpool).	?	H	H	2007	-
M 160	Government Actions (ozone action day similar to snow day)	Implement a liberal leave policy for local, state and federal employees on Code Red Ozone Action Days, permitting employees to work from home or take unscheduled leave.	?	M	H	2007	-

DRAFT

Table 1. Master List of Potential Control Measures for 8-hour Ozone SIP (last modified July 20, 2005)

List #	Measure	Description	Emission Reduction Potential	Feasibility	Cost per Ton	Timeframe (2007 or 2009)	PM2.5 Co-Benefits
M 161	Clean Air Partners: Public Outreach and Education	Implement Strategic Communication Campaigns to Increase Public Awareness (reduce vehicle use).	?	H	H	2007	-
M 162	Local Government Education Campaign	Implement Strategic Communication Campaigns to Increase Local Government Air Quality Improvement Efforts (reduce vehicle use).	?	H	H	2007	-
M 163	Mass Marketing Campaign	Marketing effort involving business-to-business advertising campaign in print media and on world wide web.	?	H	H	2007	-
M 164	Commuter Choice - State & Local Government Employees	Provide the region's local, state and municipal employees with transit benefits.	L	H	H	2007	-
M 165	Commuter Choice Tax Credit	Employers subsidize employees' monthly transit or vanpool costs and receive a tax credit for incurred expenses.	L	H	H	2007	-
M 166	Commuter Operations Center	Provides commuter assistance services, including carpool and vanpool ridematching.	L	H	H	2007	-
M 167	Guaranteed Ride Home	Provides free rides home in event of unexpected emergency or unscheduled overtime to commuters using public transport.	L	H	H	2007	-
M 168	Integrated Rideshare	Provides transit, park & ride, and telecenter information to all commuters on a matchlist.	L	H	H	2007	-
M 169	Interactive Rideshare Kiosks	Transportation Information Kiosks in Maryland, Virginia and the District of Columbia.	L	H	H	2007	-

Note: * Under discussion at IAQC.