

Appendix H

RACM Summary Table

Appendix H. Summary of RACM Review for Master List of PM2.5 Control Measures (March 7, 2008)

List #	Measure	Description	RACM: Implementation by January 2008	RACM: Enforceable?	RACM: Technologically Feasible?	RACM: Economically Feasible?	RACM: No Adverse Impacts?	RACM: Reductions >0.1tpd?	RACM: Yes/No?	RACM: Explanation
Area Sources										
A 1	Expand Seasonal Open Burning Restrictions	Expand prohibitions on seasonal open burning.	No	Yes	Yes	Yes	Yes	No	No	No creditable reductions
A 2	Control Residential Wood Burning	Implement voluntary program to reduce emissions from wood-burning fireplaces, wood stoves, and outdoor wood boilers. Set maximum moisture content for firewood sales.	Yes	No	Yes	-	Yes	No	No	No creditable emission reduction
A 3	Home Heating Oil Standards	Adopt Sulfur Standards for Home Heating Oils.	No	Yes	Yes	-	No	-	No	Will not provide reductions by January 2008
A 4	Expand Coverage of OTC AIMS Rule (Phase II)	Expand Number of Products Covered by OTC AIMS Rule. Require Lower VOC Content of Products Already Covered.	No	Yes	-	-	-	Yes	No	Will not provide reductions by January 2008
A 5	Enhanced Enforcement of Area Source Regs: Open Burning	Enhance enforcement of seasonal open burning restrictions.	Yes	Yes	Yes	-	Yes	No	No	No creditable emission reductions
A 6	RACT Update: Control Industrial Incineration	Implement programs to reduce emissions from industrial incineration.	No	Yes	-	-	-	-	No	Will not provide reductions by January 2008
A 7	Control Growth and Development: Land Use Restrictions	Implement land use restrictions to control residential, commercial, and industrial development in the nonattainment area.	-	No	Yes	-	No	-	No	No creditable reductions
A 8	Control Growth and Development: Mitigate New Development	Mitigate emissions from new development.	-	No	Yes	-	No	-	No	No creditable reductions
A 9	Implement Programs to Reduce the Urban Heat Island Effect: Forestry.	Increase Urban Tree Canopy	No	No	Yes	-	Yes	No	No	No creditable emission reduction
A 10	Implement Programs to Reduce the Urban Heat Island Effect: Roofs.	Increase Green and Cool Roof Market Penetration	No	No	Yes	-	Yes	No	No	No creditable emission reduction
A 11	Implement Programs to Reduce the Urban Heat Island Effect: Pavement.	Increase Cool Pavement Market Penetration	No	No	Yes	-	Yes	No	No	No creditable emission reduction
A 12	Control Upwind Port Emissions	Pursue approaches to reduce land-based port emissions.	No	Yes	Yes	Yes	Yes	Yes	No	Will not provide reductions by January 2008
A 13	Control Restaurant Sources	Implement programs to reduce emissions from restaurants, including charbroil operations and deep fat fryers.	No	No	Yes	No	No	No	No	Will not provide reductions by January 2008
A 14	Control Bakeries	Adopt SCAQMD Rule 1153: Commercial Bakery Ovens. Reduce exemption level and set standards for unregulated bakeries.	No	Yes	Yes	No	No	No	No	Will not provide reductions by January 2008
A 15	Control Livestock and Poultry Farms: Reduce Ammonia Emissions from Livestock and Poultry Farms	Require Livestock and Poultry Farms to Reduce Ammonia Emissions.	No	Yes	Yes	-	No	-	No	No creditable reductions
A 16	Control Landfills and Wastewater Facilities	Reduce the NOx and VOC emission limits for flares.	No	Yes	Yes	No	Yes	No	No	De minimis
A 17	Low-Emission Natural Gas Water Heaters	Adopt SCAQMD Rule 1121: Control of NOx from Residential Type Natural Gas Fired Water Heaters.	No	No	Yes	Yes	No	No	No	De minimis
A 18	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).	No	No	Yes	Yes	No	No	No	De minimis
A 19	Fuel Switch: Oil to Natural Gas or Electricity for Hot Water Heaters	Encourage Purchase of Hot Water Heaters that Use Natural Gas or Electricity.	Yes	No	Yes	-	Yes	No	No	No creditable reductions
A 20	Fuel Switch: Oil to Natural Gas for Furnaces	Encourage Purchase of Furnaces that Use Natural Gas.	Yes	No	Yes	-	Yes	No	No	No creditable reductions
A 21	Mitigation Fees: Preempted Sources	Charge emission mitigation fee to federally preempted sources.	No	-	Yes	-	Yes	-	No	Will not provide reductions by January 2008
A 22	Government Actions (Air Quality Action day similar to snow day)	Implement a liberal leave policy for local, state and federal employees on Air Quality Action Days, permitting employees to work from home or take unscheduled leave.	Yes	No	Yes	Yes	Yes	Yes	No	No creditable emission reduction
A 23	Clean Air Partners: Public Outreach and Education	Implement Strategic Communication Campaigns to Increase Public Awareness (target lawnmowers, paints, refueling).	Yes	No	Yes	Yes	Yes	Yes	No	No creditable emission reduction
A 24	Local Government Education Campaign	Encourage local governments to adopt Air Quality Action Day policies (target lawnmowers, paints, refueling).	Yes	No	Yes	Yes	Yes	Yes	No	No creditable emission reduction
A 25	Mass Marketing Campaign	Marketing effort involving business-to-business advertising campaign in print media and on world wide web.	Yes	No	Yes	Yes	Yes	Yes	No	No creditable emission reduction
A 26	Public Outreach and Education: Sources	Public Education on NOx and ROG sources in Schools and Small Businesses.	Yes	No	Yes	Yes	Yes	Yes	No	No creditable emission reduction
A 27	Episodic limits on asphalt paving and traffic marking activities	Prohibit road paving and traffic marking on Air Quality Action days.	Yes	Yes	Yes	Yes	Yes	-	No	No creditable emission reduction
Mobile Sources										
M 1	OTC Corridor Strategy	Implement truck stop electrification projects and Heavy-Duty Engine Engine Control Module (ECM) Recalibration (chip reflash) along the I-95 corridor.	Yes	No	Yes	-	Yes	-	No	No creditable emission reduction
M 2	Voluntary Diesel Retrofit Program: Local Vehicles	Retrofit diesel local vehicles.	Yes	No	Yes	-	Yes	-	No	No creditable emission reduction
M 3	Voluntary Diesel Retrofit Program: Commercial Vehicles	Retrofit diesel commercial vehicles.	Yes	No	Yes	-	Yes	-	No	No creditable emission reduction

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M 4	Voluntary Diesel Retrofit Program: School Buses	Retrofit diesel school buses.	Yes	No	Yes	-	Yes	-	No	No creditable emission reduction
M 5	Voluntary Diesel Retrofit Program: State Vehicles	Retrofit diesel state vehicles.	Yes	No	Yes	-	Yes	-	No	No creditable emission reduction
M 6	Mandatory Diesel Retrofit Program: Public Fleets	Require retrofit of on-road diesel vehicles in public fleets.	No	Yes	Yes	-	Yes	Yes	No	Will not provide reductions by January 2008
M 7	Mandatory Diesel Retrofit Program: Private Fleets	Require retrofit of on-road diesel vehicles in private fleets.	No	Yes	Yes	-	Yes	Yes	No	Will not provide reductions by January 2008
M 8	Control Bus Emissions	Provide electrified parking spaces or APUs for tour buses.	Yes	No	-	-	Yes	-	No	No creditable emission reductions
M 9	Diesel I/M Program	Perform community-based inspections of trucks and buses.	Yes	No	Yes	No	Yes	-	No	No creditable emission reduction
M 10	Roadway Dust Control: Street Sweepers	Control Roadway Dust Through Use of Street Sweepers.	Yes	-	Yes	-	Yes	-	No	No creditable emission reduction
M 11	Roadway Dust Control: Construction Trackout Mitigation Requirements	Control Roadway Dust by Mitigating Trackout from Road Construction Sites.	Yes	-	Yes	-	Yes	-	No	No creditable emission reduction
M 12	Local Hot Spot Mitigation	Local Programs to Mitigate PM Hotspots.	No	Yes	-	-	-	-	No	Will not provide reductions by January 2008
M 13	Low-emission Vehicle Purchase Program: State and Local Fleets	Accelerate adoption of low-emission vehicles, including hybrids. Focus on state and local fleets.	Yes	No	Yes	Yes	Yes	-	No	Not enforceable
M 14	Low-emission Vehicle Purchase Program: Private Owners Fleet	Accelerate adoption of low-emission vehicles. Consider use of tax incentives.	Yes	No	Yes	-	Yes	-	No	Not enforceable
M 15	Low-emission Vehicle Purchase Program: Rental Cars	Accelerate Adoption of Low-emission Vehicles. Target rental car fleets.	Yes	No	Yes	-	Yes	-	No	No creditable emission reduction
M 16	Low-emission Vehicle Purchase Program: Taxicabs	Accelerate Adoption of Low-emission Vehicles. Target taxicab fleets.	Yes	No	Yes	-	Yes	-	No	No creditable emission reduction
M 17	Low-emission Vehicle Purchase Program: Refuse Haulers	Accelerate Adoption of Low-emission Vehicles. Consider CNG refuse haulers instead of new diesel.	Yes	No	Yes	-	Yes	-	No	No creditable emission reduction
M 18	Low-emission Vehicle Purchase Program: Transit Buses	Accelerate Adoption of Low-emission Vehicles. Target transit bus fleets.	Yes	No	Yes	-	Yes	-	No	No creditable emission reduction
M 19	Electric Vehicle Tax Incentives	Establish incentives to purchase electric vehicles.	Yes	No	Yes	-	Yes	-	No	Not enforceable
M 20	Low-emission Vehicle Purchase Program: Buses	Accelerate adoption of low-emission vehicles. Consider hybrid and CNG buses.	Yes	No	Yes	-	Yes	-	No	No creditable emission reduction
M 21	Truck Idling Reduction: Truck Stop Electrification (TSE)	Implement projects to electrify truck stops.	Yes	No	Yes	-	Yes	-	No	No creditable emission reduction
M 22	Truck Idling Reduction: Auxilliary Power Units (APU)	Increase market penetration of APUs to reduce truck idling.	Yes	No	Yes	Yes	Yes	-	No	No creditable emission reduction
M 23	Promote Installation of Anti-idling Technology	Tax Incentives for Purchase and Installation of Anti-Idling Devices.	Yes	No	Yes	-	Yes	-	No	No creditable emission reduction
M 24	Expand Remote Sensing Program	Expand the Adoption of a Remote Sensing Program to Maryland and the District of Columbia.	No	Yes	Yes	-	Yes	-	No	Will not provide reductions by January 2008
M 25	Control Heavy Duty Diesel Engines	Heavy-duty engine Engine Control Module (ECM) recalibration (chip reflash).	Yes	No	Yes	-	Yes	-	No	No creditable emission reduction
M 26	Zero I/M waivers and exemptions	Eliminate all waivers and exemptions in the I/M program.	No	Yes	Yes	-	-	-	No	Will not provide reductions by January 2008
M 27	Motorcycle I/M Program	End the motorcycle smog check exemption.	No	Yes	Yes	-	Yes	-	No	Will not provide reductions by January 2008
M 28	Expand I/M Requirements to Upwind Counties	Expand Inspection and Maintenance Requirements.	No	Yes	Yes	-	Yes	Yes	No	Will not provide reductions by January 2008
M 29	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.	No	Yes	Yes	-	Yes	No	No	Will not provide reductions by January 2008
M 30	Low-Income Repair Assistance Program	Provide Assistance to Low Income Individuals to Repair Vehicles.	Yes	No	Yes	-	Yes	-	No	No creditable emission reduction
M 31	Roadway Dust Control: Wider Shoulders	Control Roadway Dust by Requiring Wide Shoulders.	No	-	-	-	Yes	-	No	Will not provide reductions by January 2008
M 32	CNG Fuel	Expand use of CNG fuel for on-road vehicles.	Yes	No	Yes	-	Yes	-	No	No creditable emission reduction
M 33	Hydrogen Fuel Initiative	Promote the Use of Hydrogen as Alternative On-Road Transportation Fuel.	No	-	No	-	Yes	-	No	Will not provide reductions by January 2008
M 34	Low-Sulfur On-Road Diesel Fuel	Require Use of Low-Sulfur On-Road Diesel Fuel	Yes	Yes	Yes	-	-	Yes	No	No additional emission reductions
M 35	Low-Sulfur On-Road Gasoline Fuel	Require Use of Low-Sulfur On-Road Gasoline Fuel	Yes	Yes	Yes	-	-	Yes	No	No additional emission reductions
M 36	Fuel Additives to Reduce NOx and SO2 Emissions	Use fuel in diesel-burning heavy duty vehicles.	Yes	No	-	No	Yes	-	No	Not enforceable
M 37	Low-NOx Diesel Fuel	Require regional use of low-NOx fuel additives for on-road diesel vehicles	No	No	-	No	Yes	-	No	Will not provide reductions by January 2008
M 38	CARB Diesel Fuel	Implement CARB Diesel Fuel Standards.	No	Yes	Yes	No	Yes	-	No	Will not provide reductions by January 2008
M 39	Incentives for Alternative Fuels	Provide Tax Incentives to Encourage Wider Use of Alternative Fuels.	No	No	Yes	-	Yes	-	No	No creditable emission reductions
M 40	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.	Yes	No	Yes	-	Yes	No	No	No creditable emission reductions
M 41	Incentives for Mixed Use at Transit Centers	Include incentives for mixed-use development at transit centers to reduce sprawl and VMT.	No	Yes	Yes	-	Yes	Yes	No	Will not provide reductions by January 2008

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M 42	Infill Development	Implement an infill development program throughout the Washington region.	No	No	Yes	-	Yes	-	No	Will not provide reductions by January 2008
M 43	Convenience Commercial Centers in Residential Areas	Change zoning ordinances to allow neighborhood-serving retail establishments in residential areas.	No	Yes	Yes	-	No	-	No	Will not provide reductions by January 2008
M 44	Control Growth and Development	Encourage mixed-use development.	Yes	No	Yes	-	Yes	Yes	No	No creditable emission reductions
M 45	Proximity Commute: Job Swap	Encourage employees of the same firm to swap jobs, permitting each to work at a location closer to home.	Yes	No	Yes	-	Yes	-	No	No creditable emission reductions
M 46	Proximity Commute: Live Near Your Work	Provides financial incentives to homebuyers moving to designated neighborhoods near their workplaces.	Yes	No	Yes	-	Yes	-	No	No creditable emission reductions
M 47	Telecommuting Centers and Telework Program	Telecommuting centers, including marketing activity, consultant support, commuter and employer information and assistance.	Yes	No	Yes	-	Yes	-	No	No creditable emission reductions
M 48	Telecourses at Local Colleges and Universities	Encourage local colleges and universities to offer telecourses to reduce vehicle trips.	Yes	No	Yes	-	Yes	-	No	No creditable emission reductions
M 49	Safe Routes to School Program	Implement a safe pedestrian and bicycle routes to school program to reduce VMT.	-	No	Yes	-	Yes	No	No	No creditable emission reduction
M 50	Commuter Operations Center	Provides commuter assistance services, including carpool and vanpool ride-matching.	Yes	No	Yes	-	Yes	-	No	No creditable emission reductions
M 51	Guaranteed Ride Home	Provides free rides home in event of unexpected emergency or unscheduled overtime to commuters using public transport.	Yes	No	Yes	-	Yes	-	No	No creditable emission reductions
M 52	Access to Jobs Program	Identifies gaps in transit service between places of residence and places of work for low wage workers.	-	No	Yes	-	Yes	No	No	No creditable emission reduction
M 53	Integrated Rideshare	Provides transit, park & ride, and telecenter information to all commuters on a matchlist.	Yes	No	Yes	-	Yes	-	No	No creditable emission reductions
M 54	Interactive Rideshare Kiosks	Transportation Information Kiosks in Maryland, Virginia and the District of Columbia.	Yes	No	Yes	-	Yes	-	No	No creditable emission reductions
M 55	Vanpool Programs	Create programs and incentives designed to increase the number of vanpools in the region.	Yes	-	Yes	-	Yes	Yes	No	No creditable emission reduction
M 56	Free Parking for Carpools/Vanpools	Provide free reserved parking spaces for all carpools or vanpools.	Yes	No	Yes	No	Yes	-	No	No creditable emission reductions
M 57	Employer Metro Shuttle Bus Services	Provide incentives for businesses to provide employee shuttle service to the nearest rail or transit stop.	Yes	No	Yes	-	Yes	-	No	No creditable emission reduction
M 58	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.	-	No	Yes	-	Yes	No	No	No creditable emission reduction
M 59	Bicycle Racks in DC	Install bicycle racks at various locations throughout the region.	Yes	No	Yes	-	Yes	No	No	No creditable emission reductions
M 60	Bike Lockers at Metro Stations, Park & Ride Lots, Other Locations	Expand existing bike lockers at Metrorail stations, install bicycle storage spaces in parking lots.	Yes	No	Yes	-	Yes	No	No	No creditable emission reduction
M 61	Bike Racks on Transit Buses	Provide external bike racks on WMATA and other local transit buses.	Yes	No	Yes	-	Yes	No	No	No creditable emission reduction
M 62	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.	Yes	No	Yes	-	Yes	No	No	No creditable emission reduction
M 63	Bike/Pedestrian Paths	Fund construction of additional bicycle/pedestrian paths in the region.	No	No	Yes	-	Yes	No	No	No creditable emission reduction
M 64	Employers Provide Free Bicycles for Midday Use	Require employers to provide one bicycle per 50 employees for mid-day business or personal use.	Yes	No	Yes	-	Yes	No	No	No creditable emission reduction
M 65	Car Sharing Program	Fund incentives for new car sharing customers (i.e., Flexcar or Zipcar services).	Yes	No	Yes	-	Yes	No	No	No creditable emission reduction
M 66	Vehicle Share Programs: Transit Stations	Develop a transit station car/low emission vehicle share program.	Yes	No	Yes	-	Yes	No	No	No creditable emission reduction
M 67	Vehicle Share Programs: Neighborhoods	Implement a neighborhood electric vehicle share program.	Yes	No	Yes	-	Yes	No	No	No creditable emission reduction
M 68	Clean Commute/Try Transit Week	Promotes use of alternative transportation, including transit, by daily commuters for one week per year.	Yes	No	Yes	-	Yes	-	No	No creditable emission reductions
M 69	Student & staff based college & university rideshare programs	Create rideshare program focused on students and staff at regional universities.	Yes	No	Yes	-	Yes	No	No	No creditable emission reduction
M 70	Establish Restricted Zones in Downtown Areas and Transit Centers	Restrict private vehicle use in certain areas during business hours, encouraging pedestrian, bicycle, and transit use.	No	Yes	Yes	-	No	Yes	No	Will not provide reductions by January 2008
M 71	4 Day Work Week/Flexible Work Schedules	Encourage employers to adopt a shorter work week, with employees working 4 10-hour days.	Yes	No	Yes	-	Yes	-	No	No creditable emission reductions
M 72	Expand Peak Period Metrorail Service	Extend peak-period service on Metrorail so trains run more frequently between 6-11 am and 3-8 pm.	No	No	-	-	Yes	-	No	Will not provide reductions by January 2008
M 73	Expand VRE Train Service	Expand VRE train service to include additional departures.	No	No	-	-	Yes	-	No	Will not provide reductions by January 2008
M 74	Support Rail to Dulles and BWI Airports	Provide funding to expand metro rail services to Dulles and BWI airports.	No	No	Yes	-	Yes	-	No	Will not provide reductions by January 2008
M 75	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.	No	No	-	-	Yes	-	No	Will not provide reductions by January 2008
M 76	Provide Additional Transit Service to Core	Increase funding for transit services to expand core service.	No	No	-	-	Yes	-	No	Will not provide reductions by January 2008

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M 77	Provide Additional Transit Service Access	Increase funding for enhancing access to transit services.	Yes	No	Yes	-	Yes	No	No	No creditable emission reductions
M 78	Regional Bus Service Expansion	Expansion of Metrobus and other regional bus services.	No	No	Yes	-	Yes	-	No	Will not provide reductions by January 2008
M 79	Express Buses From Outlying Areas	Implement direct bus service from outlying Park & Ride lots and far suburbs to major work centers.	Yes	No	Yes	-	Yes	-	No	No creditable emission reductions
M 80	Express Reverse Commuter Buses	Implement reverse commute express buses from the District to major outlying work centers.	Yes	No	Yes	-	Yes	-	No	No creditable emission reductions
M 81	New Surface Parking at Transit Centers	Add new parking spaces at transit centers (bus, Metrorail, MARC, VRE) parking lots.	No	No	Yes	-	Yes	No	No	No creditable emission reductions
M 82	Build Park & Ride Lots at Major Intersections of Commuter Highways	Construct new park & ride commuter lots along HOV facilities.	Yes	Yes	Yes	-	Yes	-	No	No creditable emission reductions
M 83	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.	No	No	-	-	Yes	-	No	No creditable emission reductions
M 84	New MARC Coaches	Purchase additional coaches for MARC to accommodate increased ridership.	No	No	Yes	-	Yes	-	No	Will not provide reductions by January 2008
M 85	Additional Transit Stores	Establish additional stationary transit stores in the region.	Yes	No	Yes	-	Yes	No	No	No creditable emission reductions
M 86	ATM Machines Installed at Metro Stations	Install ATMs near metro stations for rider convenience.	Yes	No	Yes	-	Yes	-	No	No creditable emission reductions
M 87	Traffic Signal Optimization	Regularly optimize traffic signals to reduce idling and low-speed emissions.	Yes	Yes	Yes	-	Yes	-	No	No creditable emission reductions
M 88	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.	Yes	No	Yes	-	Yes	No	No	No creditable emission reductions
M 89	Manage Roadway Usage: Traffic Incident Management	Regional Travel Information System/Driver Assistance. Enhance real time traffic information to allow drivers to make better decisions about when and where to travel.	-	No	-	-	Yes	-	No	No creditable emission reductions
M 90	Replace Traffic Signals with Lesser Controls	Install roundabouts in place of signals at low volume intersections.	No	Yes	Yes	-	Yes	-	No	Will not provide reductions by January 2008
M 91	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.	Yes	Yes	Yes	-	Yes	-	No	No creditable emission reductions
M 92	Extend Ramp Metering	Install signals to control flow of vehicles at selected freeway ramp entrances to maintain level of service.	Yes	Yes	Yes	-	-	No	No	No creditable emission reductions
M 93	Expand HOV Network on the Freeway System	Construct additional HOV lanes on regional freeways.	No	-	Yes	-	Yes	-	No	Will not provide reductions by January 2008
M 94	Manage Roadway Usage: Dedicated Bus Lanes	Dedicate roadway lanes for use by buses.	No	Yes	Yes	-	No	-	No	Potential adverse impacts
M 95	Gas Tax Increase	Implement a fuel tax on on-road gasoline.	No	Yes	Yes	-	No	-	No	Will not provide reductions by January 2008
M 96	Diesel Tax Increase	Implement a fuel tax on on-road diesel.	No	Yes	Yes	-	No	-	No	Will not provide reductions by January 2008
M 97	Value Pricing (HOT lanes)	Implement value pricing strategies on busy freeways during rush hour.	No	Yes	Yes	-	-	-	No	Will not provide reductions by January 2008
M 98	Green Curb Initiative	Restricted Access/ "Green Curb". Differential fees and access permits applied during periods of high congestion. Target delivery/loading zones and carpool/vanpool pickup areas.	No	Yes	Yes	-	-	No	No	Will not provide reductions by January 2008
M 99	Congestion Pricing on Low Occupancy Vehicles	Impose a fee on vehicles containing two or fewer persons that use designated roadways, tunnels, and bridges during the peak AM periods.	No	Yes	Yes	-	-	-	No	Will not provide reductions by January 2008
M 100	Establish Clean Air Fund	Sell Clean Air License Plates to fund air quality programs (similar to "Save the Bay" tags).	No	Yes	Yes	Yes	Yes	-	No	Will not provide reductions by January 2008
M 101	Electronic Tolling	Expand interoperability of electronic tolling systems.	Yes	Yes	Yes	-	Yes	-	No	No creditable emission reductions
M 102	Annual Gasoline Vehicle Pollution Fee	Levy an annual fee on petroleum-powered vehicles based on mileage driven and emission rates (odometer tax).	No	Yes	-	-	-	-	No	Will not provide reductions by January 2008
M 103	VMT-Based Car Tax	Charge VMT fee for all vehicles registered or garaged in the region.	No	Yes	-	-	-	-	No	Will not provide reductions by January 2008
M 104	Graduated Car Tax: Additional Vehicles	Charge higher car tax on each additional vehicle registered by a household.	No	Yes	Yes	-	-	-	No	Will not provide reductions by January 2008
M 105	Graduated Car Tax: Miles Per Gallon	Charge graduated car taxes based on a vehicle's EPA miles per gallon rating.	No	-	-	-	-	-	No	Will not provide reductions by January 2008
M 106	Graduated Car Tax: Petroleum-Based Vehicles only	Implement region-wide car tax for petroleum-fueled vehicles.	No	Yes	Yes	-	-	-	No	Will not provide reductions by January 2008
M 107	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.	No	Yes	-	-	-	-	No	Will not provide reductions by January 2008
M 108	Pay-as-you-drive auto insurance (\$/gal)	Offer auto insurance rates linked to number of gallons of fuel consumed by vehicle.	No	Yes	-	-	-	-	No	Will not provide reductions by January 2008

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M 109	Mobile Source Mitigation Fees: Vehicle Garage	Collect a fee from each homeowner with a vehicle garage.	No	Yes	-	-	-	-	No	Will not provide reductions by January 2008
M 110	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.	No	Yes	-	-	-	-	No	Will not provide reductions by January 2008
M 111	Area Pricing: Entry Fees	Collect fees from drivers to enter a pre-defined area.	No	Yes	Yes	-	-	-	No	Will not provide reductions by January 2008
M 112	Commuter Parking Tax: Employees	Implement daily tax on employees using commuter parking spaces.	No	No	Yes	No	No	-	No	Will not provide reductions by January 2008
M 113	Commuter Parking Tax: Employers with No Discounted Commuter Parking Spaces	Implement daily tax on employers providing free or discounted commuter parking spaces.	No	No	Yes	No	No	-	No	Will not provide reductions by January 2008
M 114	Commuter Parking Tax: Employers with No Transit Benefits	Implement daily tax on employers who do not provide transit benefits to employees.	No	Yes	Yes	No	No	-	No	Potential adverse impacts
M 115	Market Based Parking Charge at Federal Facilities	Negotiate agreement with federal government to charge market rate for daily parking for all employees.	No	No	Yes	-	Yes	-	No	Will not provide reductions by January 2008
M 116	Parking Impact Fee: All Parking	Levy annual impact fee on every parking space in nonattainment area.	No	No	Yes	-	No	-	No	Will not provide reductions by January 2008
M 117	Parking Impact Fee: Commuter Parking	Levy an annual fee on every commuter parking space in the Washington nonattainment area.	No	No	Yes	No	No	-	No	Will not provide reductions by January 2008
M 118	Tax Parking Spaces Above Code Minimum	Discourage developers from providing parking in excess of code minimum by imposing a graduated tax on excess spaces.	No	No	Yes	No	No	-	No	Will not provide reductions by January 2008
M 119	Episodic Parking Fee Increases	Increase fees for parking garages and meter during episodes.	No	No	Yes	No	No	-	No	Will not provide reductions by January 2008
M 120	Universal Transportation Access	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.	-	No	-	-	Yes	-	No	Will not provide reductions by January 2008
M 121	Commuter Choice - State & Local Government Employees	Provide the region's local, state and municipal employees with transit benefits.	Yes	No	Yes	-	Yes	-	No	No creditable emission reductions
M 122	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.	Yes	No	Yes	No	Yes	No	No	No creditable emission reductions
M 123	Metrorail Feeder Bus Service & Fare Buydown	Improve Metrorail feeder bus service at underutilized park & ride lots, implement fare buydown program.	Yes	No	Yes	-	Yes	No	No	No creditable emission reduction
M 124	Flat Fare For All Transit Trips	Single price all public transit services with free transfers all day, 7 days per week.	-	No	-	-	Yes	-	No	Will not provide reductions by January 2008
M 125	Subsidize Transit Usage	Expand MetroChek to all public sector employees	Yes	No	Yes	-	Yes	-	No	Will not advance attainment date
M 126	Free Bus Service Off-Peak	Institute free off-peak bus service from 10-2 on weekdays and all day on weekends.	-	No	Yes	-	Yes	-	No	Will not provide reductions by January 2008
M 127	Free bus-to-rail / rail-to-bus transfers	Institute free bus-to-rail transfer similar to free rail-to-bus transfer currently in place.	-	No	Yes	-	Yes	-	No	Will not provide reductions by January 2008
M 128	Free Rail Use 10-3	Free Metrorail trips for all riders from 10AM-3PM on weekdays.	-	No	Yes	-	Yes	-	No	Will not provide reductions by January 2008
M 129	Employer Parking Cash-Out: Voluntary	Implement voluntary program encouraging employers to provide the value of subsidized parking to employees who use alternative commute strategies.	Yes	No	Yes	-	No	-	No	No creditable emission reductions
M 130	Free Transit Passes to Students	Free transit passes for high school and college students, subsidized by schools or through student registration fee.	-	No	Yes	-	Yes	-	No	Will not provide reductions by January 2008
M 131	Half Price Fares on Feeder Bus Service	All metro bus and local bus services to Metrorail and commuter rail stations reduce fares by half.	-	No	Yes	-	Yes	-	No	Will not provide reductions by January 2008
M 132	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.	Yes	No	Yes	-	Yes	-	No	Will not advance attainment date
M 133	Discount Multi-Trip Bus Fares	Introduce discount programs reducing cost of multiple bus rides through purchase of pass books (e.g. 10-trip tickets).	Yes	No	Yes	-	Yes	-	No	Will not advance attainment date
M 134	Vanpool Insurance	Establish a special risk pool to underwrite the cost of vanpool insurance.	Yes	No	Yes	-	Yes	-	No	No creditable emission reduction
M 135	Commuter Choice Tax Credit	Employers subsidize employees' monthly transit or vanpool costs and receive a tax credit for incurred expenses.	Yes	No	Yes	-	Yes	-	No	No creditable emission reductions
M 136	Rebate for Purchase of Hybrid Vehicles	Issue rebate for purchase and registration of hybrid vehicles.	Yes	No	Yes	-	Yes	-	No	No creditable emission reduction
M 137	Real-Time Bus Schedule Information	Expand trials of real-time bus schedule information to local transit providers.	Yes	No	Yes	-	Yes	No	No	No creditable emission reductions
M 138	Automatic Bus Locator System	System would provide bus location information to transit dispatchers. This would decrease wait time and improve on-time arrival/departure.	Yes	No	Yes	-	Yes	-	No	No creditable emission reductions
M 139	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.	Yes	No	Yes	-	Yes	No	No	No creditable emission reductions
M 140	Enhanced Enforcement: Bus and Truck Idling	Step-up enforcement of existing regulations to prevent extended bus and truck idling.	Yes	No	Yes	-	Yes	No	No	No creditable emission reduction

Appendix H. Summary of RACM Review for Master List of PM2.5 Control Measures (March 7, 2008)

List #	Measure	Description	RACM: Implementation by January 2008	RACM: Enforceable?	RACM: Technologically Feasible?	RACM: Economically Feasible?	RACM: No Adverse Impacts?	RACM: Reductions >0.1tpd?	RACM: Yes/No?	RACM: Explanation
M 141	Enhanced Enforcement: On-road Idling	Increase enforcement of regional idling restrictions for on-road vehicles. Expand enforcement authority to local police.	Yes	No	Yes	-	Yes	No	No	No creditable emission reduction
M 142	Enhanced Enforcement of Mobile Source Regulations	Increase smoking vehicle enforcement. Publicize Smoking Vehicle Reporting Hotline.	Yes	No	Yes	-	Yes	No	No	No creditable emission reduction
M 143	Enhanced Enforcement: Speed Limits	Increase speed limit enforcement so that more vehicles are traveling at or below the posted limit.	Yes	No	Yes	-	Yes	No	No	No creditable emission reduction
M 144	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.	No	Yes	Yes	-	Yes	No	No	Will not provide reductions by January 2008
M 145	Permit Right Turn on Red	Reduce vehicle idling time by permitting right turn on red, where safety allows.	Yes	Yes	Yes	-	Yes	No	No	No creditable emission reductions
M 146	Control Vehicle Speeds: Automated Enforcement	Automate speed enforcement and lower the speed limit to 55 mph for heavy duty vehicles.	No	Yes	Yes	-	Yes	-	No	Will not provide reductions by January 2008
M 147	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. Lower Speed Limits.	No	Yes	Yes	-	Yes	Yes	No	Will not provide reductions by January 2008
M 148	Clean Air Partners: Air Quality Action Days	Take a variety of actions on Air Quality Action Days to reduce emissions and improve air quality (free transit, telework, carpool).	Yes	No	Yes	-	Yes	-	No	No creditable emission reductions
M 149	Government Actions (air quality action day similar to snow day)	Implement a liberal leave policy for local, state and federal employees on Air Quality Action Days, permitting employees to work from home or take unscheduled leave.	Yes	No	Yes	-	Yes	-	No	No creditable emission reductions
M 150	Clean Air Partners: Public Outreach and Education	Implement Strategic Communication Campaigns to Increase Public Awareness (reduce vehicle use).	Yes	No	Yes	-	Yes	-	No	No creditable emission reductions
M 151	Local Government Education Campaign	Implement Strategic Communication Campaigns to Increase Local Government Air Quality Improvement Efforts (reduce vehicle use).	Yes	No	Yes	-	Yes	-	No	No creditable emission reductions
M 152	Mass Marketing Campaign	Marketing effort involving business-to-business advertising campaign in print media and on world wide web.	Yes	No	Yes	-	Yes	-	No	No creditable emission reductions
M 153	"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.	Yes	No	Yes	No	Yes	-	No	Not economically feasible
M 154	"Cash for Clunkers" Early Bus Engine Replacement	Replaces high-polluting diesel engines in WMATA buses with new diesel engines.	Yes	No	Yes	No	Yes	-	No	Not economically feasible
M 155	"Cash for Clunkers" Taxicab Replacement - Conventional Vehicles	Replace taxicabs with new "conventional" LDGVs.	Yes	No	Yes	No	Yes	-	No	Not economically feasible
M 156	"Cash for Clunkers" Gas Caps Program	Provide free replacement gas caps to light- and medium-duty vehicle owners.	Yes	No	Yes	-	Yes	-	No	No creditable emission reduction
M 157	Control Delivery Truck Emissions	Establish voluntary emission reduction program with delivery fleets.	Yes	No	Yes	-	Yes	-	No	No creditable emission reduction
M 158	Rush Hour Shift	Shift Metrorail AM and PM rush hours to start 30 min earlier and end 30 min later.	Yes	No	-	-	Yes	-	No	No creditable emission reduction
M 159	Mandatory Employee Commute Reduction	Mandatory employer trip reduction to reduce employee vehicle trips.	No	No	Yes	No	No	-	No	Potential adverse impacts
M 160	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.	No	Yes	-	-	No	Yes	No	Will not provide reductions by January 2008
M 161	Transportation Funding Initiatives	Require that Congestion Mitigation Air Quality (CMAQ) funds be used only for projects that improve air quality.	No	No	Yes	No	Yes	-	No	Will not provide reductions by January 2008
M 162	Restrict Parking at Schools	Restrict high school students from driving to and parking at high schools when bus service is available.	Yes	No	Yes	No	No	No	No	No creditable emission reduction
M 163	Restrict Construction of New Parking	Restrict construction of new parking at employment centers based on distance from transit and urban core.	No	Yes	Yes	-	No	-	No	No creditable emission reduction
M 164	Eliminate or Restrict Airport Parking	Eliminate airport parking and replace with alternative fuel shuttle buses.	No	No	Yes	-	No	-	No	Will not provide reductions by January 2008
M 165	Employer Parking Cash-Out: Mandatory	Implement program requiring employers to provide the value of subsidized parking to employees who use alternative commute strategies.	No	Yes	Yes	-	No	-	No	No creditable emission reductions
M 166	Episodic Voluntary Closure of Drive Through Windows	Encourage Voluntary Closure of Drive-through Windows on Days with Poor Air Quality.	Yes	No	Yes	-	No	-	No	Potential adverse impacts
M 167	Episodic Mandatory Closure of Drive Through Windows	Require Closure of Drive-through Windows on Days with Poor Air Quality.	Yes	Yes	Yes	-	No	-	No	Potential adverse impacts
M 168	Negotiate Regional Anti-Dead Heading Agreement for Taxicabs	Reduce Local Ordinances that Prevent Taxicabs from Picking Up Fares on Return Trips from Neighboring Jurisdictions.	No	Yes	Yes	Yes	No	-	No	No creditable emission reductions
M 169	Remove Trash Trucks From Area Streets	Reduce use of trash trucks through transport of trash by barge.	-	No	-	-	Yes	-	No	No creditable emission reductions
M 170	Increase Intermodal Transport	Increase use of intermodal options for transporting goods.	Yes	No	Yes	Yes	Yes	-	No	No creditable emission reduction
M 171	Fleet ILEV for light-duty gasoline vehicles	Require fleets operating in nonattainment area to be comprised of a percentage of Inherently Low Emission Vehicles (ILEV).	No	Yes	Yes	No	No	-	No	Will not provide reductions by January 2008

Appendix H. Summary of RACM Review for Master List of PM2.5 Control Measures (March 7, 2008)

List #	Measure	Description	RACM: Implementation by January 2008	RACM: Enforceable?	RACM: Technologically Feasible?	RACM: Economically Feasible?	RACM: No Adverse Impacts?	RACM: Reductions >0.1tpd?	RACM: Yes/No?	RACM: Explanation
M 172	Improve Truck Fleet Fuel Economy	Encourage adoption of technologies that increase truck fleet fuel economy.	Yes	No	-	Yes	Yes	-	No	No creditable emission reduction
M 173	Tire Replacement and Inflation Program	Improve Fleet Fuel Economy by Implementing Program to Replace Tires and Ensure Proper Tire Inflation.	Yes	No	Yes	-	Yes	-	No	No creditable emission reduction
Non-road Sources										
N 1	Non-Road Diesel Engine Retrofit Program: Voluntary	Develop voluntary program encouraging retrofit of non-road diesel equipment in public and/or private fleets.	Yes	No	Yes	-	Yes	Yes	No	No creditable emission reduction
N 2	Non-Road Diesel Engine Retrofit Program: Mandatory	Develop mandatory program requiring retrofit of non-road diesel equipment in public and/or private fleets.	No	Yes	Yes	-	-	Yes	No	Will not provide reductions by January 2008
N 3	Low Sulfur Fuel for Off-Road Applications	Require Low-Sulfur Fuel for Off Road Applications.	No	Yes	Yes	-	No	Yes	No	Will not provide reductions by January 2008
N 4	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.	Yes	No	Yes	-	-	Yes	No	No creditable emission reduction
N 5	Construction Dust Control: Mitigation Requirements	Require Dust Mitigation at Construction Sites.	Yes	Yes	Yes	-	-	-	No	No creditable emission reduction
N 6	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.	Yes	No	Yes	-	-	Yes	No	No creditable emission reduction
N 7	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.	Yes	No	Yes	-	-	Yes	No	No creditable emission reduction
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.	Yes	No	Yes	-	-	Yes	No	No creditable emission reduction
N 9	Control Construction Emissions	Limitations and Fleet Rules for Construction Equipment.	No	Yes	-	No	No	Yes	No	Not economically feasible
N 10	Locomotive Engine Standards	Encourage new federal locomotive engine emission standards (EPA 2012)	No	-	-	-	Yes	Yes	No	Will not provide reductions by January 2008
N 11	Retrofit/Repower Locomotives	Provide financial incentives to retrofit or repower locomotives operating in the nonattainment area for cleaner burning diesel or alternative fuels.	Yes	No	-	-	Yes	-	No	No creditable emission reduction
N 12	Locomotive Idling Reduction	Support Installation of Idling Reduction Technologies on Locomotives.	Yes	No	Yes	-	Yes	-	No	No creditable emission reduction
N 13	Control Off-Road Diesel Engines (smoke test)	Implement mandatory smoke testing program for heavy-duty (>50 hp) off-road diesel engines.	No	Yes	Yes	No	Yes	-	No	Will not provide reductions by January 2008
N 14	Local Hot Spot Mitigation	Local Programs to Mitigate PM Hotspots.	No	-	-	-	-	-	No	Will not provide reductions by January 2008
N 15	Airport Electric GSE	Subsidize adoption of electric ground service equipment.	Yes	Yes	Yes	Yes	Yes	Yes	No	Will not advance attainment date
N 16	Airport GSE Retrofits	Subsidize the retrofit of airport ground service equipment.	Yes	Yes	Yes	Yes	Yes	Yes	No	Will not advance attainment date
N 17	Airport Emission Cap	Establish Agreement with Airports Authority to Cap or Reduce Emissions.	Yes	No	-	-	Yes	Yes	No	No creditable emission reduction
N 18	Airport Emissions Cap in Upwind Counties	Voluntary Agreement to Cap Airport Emissions Outside the Nonattainment Area.	Yes	No	-	-	Yes	Yes	No	No creditable emission reduction
N 19	Airport GSE Idling Controls	Develop voluntary program to encourage operators to limit idling of airport ground service equipment.	Yes	Yes	Yes	Yes	Yes	Yes	No	Will not advance attainment date
N 20	Airport APU Initiatives	Seek voluntary agreement to reduce use of aircraft APUs through use of gate-provided services or other strategies	Yes	Yes	Yes	Yes	Yes	Yes	No	Will not advance attainment date
N 21	Marine Diesel Engine Standards	Encourage new federal marine engine emission standards (EPA 2012).	No	-	-	-	Yes	Yes	No	Will not provide reductions by January 2008
N 22	Control Off-Road Diesel Engines (Blue Sky)	Encourage the use of engines that are included in EPA's voluntary "Blue Sky Series" engine program.	Yes	No	Yes	-	Yes	-	No	No creditable emission reductions
N 23	Industrial Equipment Replacement	Replace fossil-fuel fired industrial equipment with electric industrial equipment.	Yes	No	-	-	No	-	No	No creditable emission reductions
N 24	Industrial Equipment Retrofits	Require industrial equipment to be retrofitted with emissions controls.	No	Yes	-	-	No	-	No	Will not provide reductions by January 2008
N 25	Low-emissions Commercial and Industrial Equipment	Require sale of low-emissions commercial and industrial equipment in region.	No	Yes	-	-	-	Yes	No	Will not provide reductions by January 2008
N 26	Idling Restrictions for Commercial and Industrial Equipment	Limit idling by commercial and industrial equipment.	No	No	Yes	No	Yes	Yes	No	Not economically feasible
N 27	Control Light Commercial Equipment	Require zero emission forklifts where feasible.	No	No	-	No	Yes	No	No	Not economically feasible
N 28	Light Commercial Equipment Retrofits	Require light commercial equipment to be retrofitted with emissions controls.	No	No	-	No	-	-	No	Not economically feasible
N 29	Control Light Commercial Equipment	Retrofit portable engines and generators with emission control devices.	No	No	-	No	Yes	-	No	Not economically feasible
N 30	Recreational Equipment Retrofits	Require recreational equipment to be retrofitted with particulate filters and/or oxidation catalysts.	No	Yes	-	-	-	-	No	Not economically feasible

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N 31	Control Recreational Marine Emissions	Provide incentives for newer boats and engines.	Yes	No	Yes	No	Yes	-	No	No creditable emission reductions
N 32	Idling Restrictions for Lawn & Garden Equipment	Limit idling by commercial lawn & garden equipment.	No	No	Yes	No	-	-	No	Not enforceable
N 33	Agricultural Equipment Retrofits	Require agricultural equipment to be retrofitted with emissions controls.	No	Yes	-	-	-	-	No	Will not provide reductions by January 2008
N 34	Agricultural Equipment Use Restrictions	Ban use of agricultural equipment on Air Quality Action Days.	Yes	No	Yes	No	No	-	No	Not feasible
N 35	Low-emissions Agricultural Equipment	Require sale of low-emissions agricultural equipment in region.	No	Yes	-	No	No	-	No	Will not provide reductions by January 2008
N 36	Control Commercial Marine Sources	Tug/Push Boat Activity Reductions.	No	Yes	Yes	No	No	-	No	Potential adverse impacts
N 37	Agricultural Dust Control	Control Dust from Agricultural Operations.	Yes	No	-	-	-	No	No	No creditable emission reductions
N 38	Industrial and Commercial Dust Control	Control Dust from Commercial and Industrial Operations.	Yes	No	-	-	-	No	No	No creditable emission reductions
N 39	Purchase Natural Gas Off-Road Equipment	Encourage Purchase Natural Gas Off-Road Equipment.	Yes	No	-	-	Yes	No	No	No creditable emission reductions
N 40	Require low-NOx fuel for recreational equipment	Require recreational equipment to use low-NOx fuel additives during ozone season.	Yes	Yes	Yes	Yes	-	-	No	Will not advance attainment date
N 41	Low-NOx Fuel for Lawn & Garden Equipment	Require diesel-fired lawn & garden equipment to use low-NOx fuel additives during ozone season.	No	No	-	No	Yes	-	No	No creditable emission reduction
N 42	Low-NOx Fuel for Recreational Marine Equipment	Require diesel-fired recreational marine equipment to use low-NOx fuel additives during ozone season.	Yes	Yes	Yes	Yes	Yes	-	No	No creditable emission reduction
N 43	Require Low-NOx Fuel for Airport GSE	Require airport GSE to use low-NOx fuel additives during ozone season.	Yes	Yes	Yes	Yes	Yes	-	No	No creditable emission reduction
N 44	Require Low-NOx Fuel for Industrial Equipment	Require industrial equipment to use low-NOx fuel additives during ozone season.	Yes	Yes	Yes	Yes	Yes	-	No	No creditable emission reduction
N 45	Require Low-NOx Fuel for Light Commercial Equipment	Require light commercial equipment to use low-NOx fuel during ozone season, if applicable.	Yes	Yes	Yes	Yes	Yes	-	No	No creditable emission reduction
N 46	Episodic Low-NOx Fuel for Construction Equipment	Require diesel-fired construction equipment operating in region to use low-NOx fuel additives during ozone season.	Yes	Yes	Yes	Yes	Yes	-	No	No creditable emission reduction
N 47	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.	Yes	Yes	Yes	Yes	Yes	-	No	No creditable emission reduction
N 48	Episodic Low-NOx Fuel for Construction Equipment	Voluntary use of low-NOx fuel additives by diesel-fired construction equipment during ozone season.	Yes	Yes	Yes	Yes	Yes	-	No	No creditable emission reduction
N 49	Control Recreational Equipment Emissions	Increase registration fee on recreational vehicles (dedicate fee to clean air fund).	No	Yes	Yes	No	Yes	-	No	Not economically feasible
N 50	Control Upwind Port Emissions	Emission Fee Program for Port-Related Mobile Sources	No	Yes	Yes	-	Yes	-	No	No creditable emission reductions
N 51	Graduated registration fees for recreational boats	Levee additional registration fee for registration of boats with old, high-emission engines.	No	Yes	Yes	No	-	-	No	Will not provide reductions by January 2008
N 52	Airport Congestion Pricing	Charge higher aircraft landing fees during busy times of day to reduce airport delays and congestion.	No	Yes	Yes	No	Yes	Yes	No	Not economically feasible
N 53	Gas Tax Increase	Implement a fuel tax on off-road gasoline.	No	Yes	Yes	No	-	-	No	Not economically feasible
N 54	Diesel Tax Increase	Implement a fuel tax on off-road diesel.	No	Yes	Yes	No	-	-	No	Not economically feasible
N 55	Episodic Restrictions on Lawn & Garden Equipment (mandatory)	Restrict use of lawn and garden equipment during Air Quality Action days.	No	-	Yes	-	No	Yes	No	No creditable emission reduction
N 56	Episodic Restrictions on Recreational Equipment Use (mandatory)	Restrict use of recreational equipment during Air Quality Action days.	No	-	Yes	-	No	Yes	No	No creditable emission reduction
N 57	Episodic Restrictions on Use of Commercial and Industrial Equipment (mandatory)	Restrict use of commercial and industrial equipment during Air Quality Action Days.	No	-	Yes	-	No	Yes	No	No creditable emission reduction
N 58	Episodic Commercial Lawn & Garden Equipment Use Restrictions (voluntary)	Encourage restricted use of commercial lawn and garden equipment on Air Quality Action Days.	Yes	No	Yes	-	Yes	Yes	No	No creditable emission reduction
N 59	Episodic Residential Lawn & Garden Equipment Use Restrictions (voluntary)	Encourage restricted use of residential lawn & garden equipment on Air Quality Action Days.	Yes	No	Yes	-	Yes	Yes	No	No creditable emission reduction
N 60	Episodic Commercial and Industrial Equipment Use Restrictions (voluntary)	Encourage restricted use of commercial and industrial equipment during Air Quality Action Days.	Yes	No	Yes	-	Yes	Yes	No	No creditable emission reduction
N 61	Episodic No Mow Policy on Code Red Days (voluntary)	Voluntary reduction in mowing on Code Red Days.	Yes	No	Yes	-	Yes	Yes	No	No creditable emission reduction
N 62	Episodic Recreational Marine Equipment Use Restrictions (mandatory)	Ban use of recreational marine equipment on Code Red Air Quality Action Days.	Yes	Yes	Yes	No	No	-	No	Potential adverse impacts
N 63	Episodic Recreational Marine Equipment Use Restrictions (voluntary)	Encourage restricted use of all recreational marine equipment on Air Quality Action Days.	Yes	No	Yes	Yes	Yes	-	No	Will not advance attainment date
N 64	Episodic Recreational Marine Idling Restrictions (mandatory)	Ban idling by recreational marine equipment on Code Red Air Quality Action Days.	Yes	Yes	Yes	No	Yes	-	No	Will not advance attainment date
N 65	Episodic Recreational Marine Idling Restrictions (voluntary)	Encourage reduced idling by recreational marine equipment on Air Quality Action Days.	No	No	Yes	No	Yes	-	No	No creditable emission reductions
N 66	Episodic Recreational Marine Idling Restrictions (mandatory)	Ban idling by recreational marine equipment during ozone season.	Yes	Yes	Yes	No	Yes	-	No	Will not advance attainment date
N 67	Recreational Marine Idling Restrictions	Ban idling by recreational marine equipment year-round.	Yes	Yes	Yes	No	Yes	-	No	Will not advance attainment date

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N 68	"Cash for Clunkers" 2-cycle Engines	Implement a 2-cycle Engine Replacement Program.	Yes	No	Yes	No	Yes	-	No	No creditable emission reductions
N 69	"Cash for Clunkers" Lawn & Garden Equipment	Offer cash for consumers to turn in lawnmowers or lawn tractors and purchase electric or push mowers.	Yes	No	Yes	No	Yes	-	No	No creditable emission reductions
N 70	"Cash for Clunkers" Outboard Motors	Offer cash for consumers to turn in old outboard motors and purchase new ones.	Yes	No	Yes	No	Yes	-	No	No creditable emission reductions
N 71	"Cash for Clunkers" Recreational Equipment Program	Offer cash for owners to turn in old, high-emission recreational equipment.	Yes	No	Yes	No	Yes	-	No	No creditable emission reductions
N 72	"Cash for Clunkers" Construction Equipment Program	Offer Cash to Construction Equipment Owners to Retire Old High Emitting Construction Equipment.	Yes	No	Yes	No	Yes	-	No	No creditable emission reductions
N 73	Control Emissions from Lawn and Garden Equipment (xeriscaping)	Adopt measures to reduce lawn area and mower usage. Xeriscaping.	Yes	No	Yes	Yes	Yes	-	No	No creditable emission reductions
N 74	Agricultural Equipment Use Restrictions (voluntary)	Voluntary moratorium on use of agricultural equipment on Air Quality Action Days.	Yes	No	Yes	No	Yes	-	No	No creditable emission reductions
N 75	Low Maintenance Landscape Initiative	"Lawn Care for Cleaner Air": increase use of low maintenance landscapes.	Yes	No	Yes	Yes	Yes	-	No	No creditable emission reduction
Stationary Sources										
S 1	Reductions from EGUs: OTC Model Rule	Adopt OTC Multipollutant Model Rule for EGUs.	No	Yes	Yes	Yes	Yes	Yes	No	Will not provide reductions by January 2008
S 2	OTC Model Rule: Distributed Generation Rule	Adopt OTC Model Rule to Require Additional Controls on Distributed Generation Sources.	No	Yes	Yes	-	No	Yes	No	Will not provide reductions by January 2008
S 3	OTC Model Rule: Peaking Unit Rule	Adopt OTC Model Rule to Require Additional Controls on EGU Peaking Units.	No	Yes	-	-	No	Yes	No	Will not provide reductions by January 2008
S 4	OTC Model Rule: ICI Boiler Standards	Adopt OTC Model Rule on Standards for Industrial, Commercial, and Institutional Boilers.	No	Yes	Yes	Yes	No	Yes	No	Will not provide reductions by January 2008
S 5	Control Municipal Solid Waste Incinerators	Adopt OTC Model Rule on RACT Update for MSW Incineration Facilities.	No	Yes	Yes	-	Yes	Yes	No	Will not provide reductions by January 2008
S 6	Upwind NOx Controls: Expand NOx RACT to Upwind Counties	Expand NOx RACT Requirements to Upwind Counties.	No	Yes	-	Yes	Yes	Yes	No	Will not provide reductions by January 2008
S 7	Reductions from EGUs Plant RACT/Technology-Based Approach	Identify and Require Additional Power Plant-Specific Emission Reduction Technologies.	-	Yes	Yes	-	-	Yes	No	No creditable emission reductions
S 8	Reductions from EGUs: Revised Opacity Limits	Lower Opacity Limits for EGUs.	No	Yes	Yes	-	-	Yes	No	Will not provide reductions by January 2008
S 9	Episodic Mandatory Facility Reductions	Require mandatory facility reductions on Air Quality Action Days. Require Curtailment Plan.	No	Yes	Yes	-	No	No	No	No creditable emission reductions
S 10	Reductions from EGUs: Improved Start-up and Shut-down Procedures	Improve Start-up and Shut-down Procedures at Power Plants.	No	Yes	-	-	Yes	-	No	Will not provide reductions by January 2008
S 11	Low Sulfur Fuel Oil for Stationary Sources	Require Use of Low Sulfur Fuel Oil for Stationary Sources.	No	Yes	-	-	Yes	-	No	Will not provide reductions by January 2008
S 12	Low Sulfur Coal for Stationary Sources	Low Sulfur Coal for Stationary Sources.	No	Yes	-	-	Yes	-	No	Will not provide reductions by January 2008
S 13	Reductions from EGUs: Fuel Switch (Coal to Oil, Natural Gas, Biodiesel)	Encourage EGUs to Switch from Coal to Oil, Natural Gas, or Biodiesel.	No	-	-	-	-	-	No	Will not provide reductions by January 2008
S 14	Reductions from EGUs: Coal Washing	Require Coal Washing to Reduce Emissions from EGUs.	No	Yes	Yes	-	-	-	No	Will not provide reductions by January 2008
S 15	Local Hot Spot Mitigation	Local Programs to Mitigate PM Hotspots.	No	-	-	-	-	-	No	Will not provide reductions by January 2008
S 16	Emission Budgets and Mitigation Requirements for General Conformity Projects	Establish Emission Budgets and Require Mitigation for Projects Subject to General Conformity.	No	Yes	Yes	-	-	-	No	Will not provide reductions by January 2008
S 17	Energy Efficiency Programs	Increase Adoption of Energy Efficient Technology by Government and the Private Sector with Commensurate Retirement of EGU NOx Allowances.	-	Yes	Yes	-	Yes	-	No	Will not advance attainment date
S 18	Upwind SO2 Controls: Plant-by-Plant BACT Controls	Reduce Upwind SO2 Emissions by Requiring Facility-Specific Controls.	No	Yes	-	Yes	Yes	Yes	No	Will not provide reductions by January 2008
S 19	Federal Multipollutant Legislation	Implement Federal Multipollutant Legislation.	No	Yes	Yes	Yes	Yes	Yes	No	Will not provide reductions by January 2008
S 20	State Multipollutant Legislation	Adopt State Multipollutant Legislation.	No	Yes	Yes	Yes	Yes	Yes	No	Will not provide reductions by January 2008
S 21	Control Asphalt Facilities	Require NOx emission limits on asphalt production facilities.	No	Yes	Yes	No	No	Yes	No	Will not provide reductions by January 2008
S 22	Facility Modernization	Encourage Facility Modernization to Reduce Emissions.	No	No	-	-	Yes	-	No	Will not provide reductions by January 2008
S 23	Low NOx Fuel Oil for Stationary Sources	Require oil-burning stationary sources to burn ThermaNOx, a low-NOx No. 2 fuel oil emulsion, during ozone season.	No	-	Yes	-	Yes	-	No	No creditable emission reductions
S 24	Statewide Emission Registration Program	Require a mandatory statewide registration program for all NOx and VOC emission sources.	No	Yes	Yes	No	No	Yes	No	Not economically feasible
S 25	Emission Reduction Credit Retirement Program	Establish program to retire emission reduction credits for stationary sources.	No	Yes	Yes	Yes	-	Yes	No	Will not provide reductions by January 2008
S 26	Enhanced Enforcement/Rule Compliance at Existing Stationary Sources	Step up enforcement of and compliance with existing rules for emissions control by stationary sources.	Yes	Yes	Yes	No	Yes	No	No	No creditable emission reductions
S 27	Energy Efficiency: Energy Efficiency Standards	Establish requirements for minimum energy efficiency, with Commensurate Retirement of EGU NOx Allowances.	-	Yes	Yes	-	Yes	-	No	Will not advance attainment date

Appendix H. Summary of RACM Review for Master List of PM2.5 Control Measures (March 7, 2008)

List #	Measure	Description	RACM: Implementation by January 2008	RACM: Enforceable?	RACM: Technologically Feasible?	RACM: Economically Feasible?	RACM: No Adverse Impacts?	RACM: Reductions >0.1tpd?	RACM: Yes/No?	RACM: Explanation
S 28	Renewable Energy: Renewable Portfolio Standards	Increase Purchases of Renewable Energy by Government and the Private Sector, with Commensurate Retirement of EGU NOx Allowances.	-	Yes	Yes	-	Yes	-	No	Will not advance attainment date
S 29	Renewable Energy: Solar Photovoltaic Programs	Increase Purchases and Installation of Renewable Energy sources by Government and the Private Sector, with Commensurate Retirement of EGU NOx Allowances. Consider Incentive Programs.	-	Yes	Yes	-	Yes	-	No	Will not advance attainment date
S 30	Renewable Energy: Wind Energy Purchases	Increase Purchases of Renewable Energy by Government and the Private Sector, with Commensurate Retirement of EGU NOx Allowances.	-	Yes	Yes	No	Yes	-	No	Will not advance attainment date
S 31	Renewable Energy: Solar Hot Water Heating	Increase Use of Solar Hot Water Heating by Government and the Private Sector, with Commensurate Retirement of EGU NOx Allowances.	-	Yes	Yes	-	Yes	-	No	Will not advance attainment date
S 32	Energy Efficiency: Energy Performance Contracting Program	Increase Use of Energy Performance Contracts in the Public and/or Private sector to Reduce Energy Consumption, with Commensurate Retirement of EGU NOx Allowances.	-	Yes	Yes	-	Yes	-	No	Will not advance attainment date
S 33	Energy Efficiency Programs: LED Traffic Signal Retrofit Program	Increase Use Energy Efficient LED Traffic Signals.	-	Yes	Yes	Yes	Yes	-	No	Will not advance attainment date
S 34	Energy Efficiency: Green Building Programs	Implement Green Building Programs. Establish energy efficiency standards for building codes, with Commensurate Retirement of EGU NOx Allowances.	-	Yes	Yes	-	Yes	-	No	Will not advance attainment date
S 35	Energy Efficiency: Ground Source Heat Pump Initiative	Increase Purchases and Installation of Ground Source Heat Pumps in the Public and/or Private Sector, with Commensurate Retirement of EGU NOx Allowances.	-	Yes	Yes	-	Yes	-	No	Will not advance attainment date
S 36	Energy Efficiency Programs: LED Street Light Retrofit Program	Increase Use of Energy Efficient LED Street Lights.	-	Yes	-	-	Yes	-	No	Will not advance attainment date
S 37	Energy Efficiency: Energy Star Exit Signs	Increase market penetration of Energy Efficient Lighting (EXIT Signs).	-	Yes	Yes	-	Yes	-	No	Will not advance attainment date
S 38	Low-Income Residential Building Efficiency Improvement Program	Provide assistance to low income individuals to improve energy efficiency of residential dwellings.	Yes	No	Yes	-	Yes	No	No	Not enforceable
S 39	Renewable Energy and Energy Efficiency: New Home Construction Requirements	Require that developers offer clean energy and energy efficiency features in new homes.	No	Yes	Yes	Yes	-	-	No	Will not provide reductions by January 2008
S 40	Solid Waste Recycling	Increase Recycling Rates to Reduce Trash at MSW Incinerators.	Yes	No	Yes	-	Yes	-	No	No creditable emission reductions
S 41	Upwind SO2 Controls: Expand SO2 RACT to Upwind Counties	Expand SO2 RACT to Upwind Counties	No	Yes	Yes	-	-	Yes	No	Will not provide reductions by January 2008
S 42	Upwind Metallurgical Industry Controls: Iron and Steel	Control Upwind Iron and Steel Production Emissions.	No	Yes	-	-	-	-	No	Will not provide reductions by January 2008
S 43	Upwind Metallurgical Industry Controls: Lead	Control Upwind Lead Smelter Emissions.	No	Yes	-	-	-	-	No	Will not provide reductions by January 2008
S 44	Upwind Metallurgical Industry Controls: Aluminum	Control Upwind Aluminum Production Emissions.	No	Yes	-	-	-	-	No	Will not provide reductions by January 2008
S 45	Upwind Metallurgical Industry Controls: Zinc/Copper	Control Upwind Zinc/Copper Smelter Emissions.	No	Yes	-	-	-	-	No	Will not provide reductions by January 2008
S 46	Upwind Forest Product Industry Controls	Control Upwind Wood, Paper and Pulp Production Emissions.	No	Yes	-	-	-	-	No	Will not provide reductions by January 2008
S 47	Upwind VOC Controls: Plant-by-Plant BACT Controls	Identify and Require Additional Facility-Specific Emission Reduction Technologies.	No	Yes	-	-	-	Yes	No	Will not provide reductions by January 2008
S 48	Upwind NOx Controls: Plant-by-Plant BACT Controls	Identify and Require Additional Facility-Specific Emission Reduction Technologies.	No	Yes	-	-	-	Yes	No	Will not provide reductions by January 2008
S 49	Control Portland Cement Facilities	Adopt OTC Model Rule on RACT Update for Portland Cement Facilities.	No	Yes	Yes	Yes	No	Yes	No	Will not provide reductions by January 2008
S 50	Mineral Products Industry Controls: Glass and Fiberglass	Control Glass and Fiberglass Facility Emissions.	No	Yes	Yes	Yes	Yes	No	No	Will not provide reductions by January 2008