

Appendix I

RACM Documentation

Appendix

Analysis of Potential Stationary Source Measures * * *DRAFT March 15, 2007* * *

Potential Stationary Source RACM Measures in the Metropolitan Washington Region

Quick Reference	Measure Name	Definition	RACM	Reason
CAIR Plus	Reductions from EGUs: OTC Model Rule	Adopt OTC Multipollutant Model Rule for EGUs.	No	Will not provide reductions by May 2008
Dist Generation Rule	OTC Model Rule: Distributed Generation Rule	Adopt OTC Model Rule to Require Additional Controls on Distributed Generation Sources.	No	Will not provide reductions by May 2008
Peaking Unit Rule	OTC Model Rule: Peaking Unit Rule	Adopt OTC Model Rule to Require Additional Controls on EGU Peaking Units.	No	Will not provide reductions by May 2008
ICI Stds	OTC Model Rule: ICI Boiler Standards	Adopt OTC Model Rule on Standards for Industrial, Commercial, and Institutional Boilers.	No	Will not provide reductions by May 2008
RACT Cement	Control Portland Cement Facilities	Adopt OTC Model Rule on RACT Update for Portland Cement Facilities.	No	Will not provide reductions by May 2008
Glass Facility	Mineral Products Industry Controls: Glass and Fiberglass	Control Glass and Fiberglass Facility Emissions.	No	Will not provide reductions by May 2008
MSW	Controls on Municipal Solid Waste Incinerators	Adopt OTC Model Rule on RACT Update for MSW Incineration Facilities.	No	Will not provide reductions by May 2008
Asphalt Facilities	Control Asphalt and Concrete Facilities	Require NOx emission limits on asphaltic concrete production facilities.	No	Will not provide reductions by May 2008
Chem VOC	Control VOC Emissions from Chemical Manufacturing	Chemical Manufacturing: More stringent standards on the manufacture of polystyrene, formica, polyester resin, wood and paper, other polymers, pharmaceuticals, paints, varnishes, soaps, detergents, inks, solvents, fuel additives, acids, fertilizers, and resins.	No	Will not provide reductions by May 2008
EGU RACT	Reductions from EGUs Plant RACT/Technology-Based Approach	Identify and Require Additional Power Plant-Specific Emission Reduction Technologies.	No	No creditable emission reductions
Multi P Legislation	State Multipollutant Legislation	Adopt State Multipollutant Legislation.	No	Will not provide reductions by May 2008
Clear Skies	Clear Skies Act	Implement Clear Skies Legislation.	No	Will not provide reductions by May 2008
Local Cap Trade	Local Cap and Trade Program	Implement cap and trade program for VOC sources in region. Consider California RECLAIM program.	No	Will not provide reductions by May 2008
Episodic Reductions	Episodic Mandatory Facility Reductions	Require mandatory facility reductions on Air Quality Action Days. Require Curtailment Plan.	No	No creditable emission reductions
Enhanced Enforce Stationary	Enhanced Enforcement/Rule Compliance at Existing Stationary Sources	Step up enforcement of and compliance with existing rules for emissions control by stationary sources.	No	No creditable emission reductions
Emission Registration	Statewide Emission Registration Program	Require a mandatory statewide registration program for all NOx and VOC emission sources.	No	Not economically feasible
Credit Retirement	Emission Reduction Credit Retirement Program	Establish program to retire emission reduction credits for stationary sources.	No	Will not provide reductions by May 2008
Low Nox Fuel Oil	Low NOx Fuel Oil for Stationary Sources	Require oil-burning stationary sources to burn ThermoNOx, a low-NOx No. 2 fuel oil emulsion, during ozone season.	No	Will not provide reductions by May 2008
Upwind NOx RACT	Upwind NOx Controls: Expand NOx RACT to Upwind Counties	Expand NOx RACT Requirements.	No	Will not provide reductions by May 2008
Upwind NOx BACT	Upwind NOx Controls: Plant-by-Plant BACT Controls	Identify and Require Additional Facility-Specific Emission Reduction Technologies.	No	Will not provide reductions by May 2008
Upwind VOC RACT	Upwind VOC Controls: Expand VOC RACT to Upwind Counties	Expand VOC RACT Requirements.	No	Will not provide reductions by May 2008
Upwind VOC BACT	Upwind VOC Controls: Plant-by-Plant BACT Controls	Identify and Require Additional Facility-Specific Emission Reduction Technologies.	No	Will not provide reductions by May 2008
Chemical Ind Controls	Chemical Industry Controls	Reduce upwind NOx emissions limits in the manufacture of chemicals.	No	Will not provide reductions by May 2008
Forest Products	Forest Product Industry Controls	Control Upwind Wood, Paper and Pulp Production Emissions.	No	Will not provide reductions by May 2008
Upwind Iron and Steel	Metallurgical Industry Controls: Iron and Steel	Control Upwind Iron and Steel Production Emissions.	No	Will not provide reductions by May 2008
Upwind Lead	Metallurgical Industry Controls: Lead	Control Upwind Lead Smelter Emissions.	No	Will not provide reductions by May 2008
Upwind Aluminum	Metallurgical Industry Controls: Aluminum	Control Upwind Aluminum Production Emissions.	No	Will not provide reductions by May 2008

Upwind Zinc	Metallurgical Industry Controls: Zinc/Copper	Control Upwind Zinc/Copper Smelter Emissions.	No	Will not provide reductions by May 2008
Upwind Lime	Mineral Products Industry Controls: Lime	Control Upwind Lime Facility Emissions.	No	Will not provide reductions by May 2008
Upwind Phosphate	Mineral Products Industry Controls: Phosphate	Control Upwind Phosphate Rock Plant Emissions.	No	Will not provide reductions by May 2008
RACT Refineries	Upwind RACT Update: Refineries	Update RACTs for Refineries in Upwind Contributing Areas.	No	Will not provide reductions by May 2008
Energy Efficiency	Energy Efficiency Programs	Increase Adoption of Energy Efficient Technology by Government and the Private Sector with Commensurate Retirement of EGU NOx Allowances.	No	Will not advance attainment date
Efficiency Standards	Energy Efficiency: Energy Efficiency Standards	Establish requirements for minimum energy efficiency, with Commensurate Retirement of EGU NOx Allowances.	No	Will not advance attainment date
Green Building Codes	Energy Efficiency: Green Building Code Program	Establish energy efficiency standards for building codes, with Commensurate Retirement of EGU NOx Allowances.	No	Will not advance attainment date
Renewable Portfolio	Renewable Energy: Renewable Portfolio Standards	Increase Purchases of Renewable Energy by Government and the Private Sector, with Commensurate Retirement of EGU NOx Allowances.	No	Will not advance attainment date
Solar Photovoltaics	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.	No	Will not advance attainment date
Wind Energy	Renewable Energy: Wind Energy Purchases	Increase Purchases of Renewable Energy by Government and the Private Sector, with Commensurate Retirement of EGU NOx Allowances.	No	Will not advance attainment date
Solar Hot Water	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.	No	Will not advance attainment date
Heat Pumps	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.	No	Will not advance attainment date
Performance Contracting	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.	No	Will not advance attainment date
LED Traffic	Energy Efficiency Programs: LED Traffic Signal Retrofit Program	Increase Use Energy Efficient LED Traffic Signals.	No	Will not advance attainment date
LED Street	Energy Efficiency Programs: LED Street Light Retrofit Program	Increase Use of Energy Efficient LED Street Lights.	No	Will not advance attainment date
EStar Exit	Energy Efficiency: Energy Star Exit Signs	Increase market penetration of Energy Efficient Lighting (EXIT Signs).	No	Will not advance attainment date

Measure -- Reductions from EGUs: OTC Model Rule

Quick Reference: CAIR Plus
Measure Name: Reductions from EGUs: OTC Model Rule
Description: Adopt OTC Multipollutant Model Rule for EGUs.

RACM Determination: No
Will not provide reductions by May 2008
Reason:

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	Yes
No Adverse Impacts	Yes
Reductions >0.1 tpd	Yes

Estimated Cost Effectiveness	<\$10,000/ton
Estimated Reductions	5-10 tpd NOx

Issues

- Mandatory Program. This measure would require either state-level regulation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Any regulation creating emission limits more stringent than CAIR would be controversial.
- After a rule is adopted, industry will require additional time to install controls.
- Year of first benefits is 2009.

Summary Analysis

Not RACM. This measure cannot deliver benefits by May 2008.

Measure -- OTC Model Rule: Distributed Generation Rule

Quick Reference: Dist Generation Rule
Measure Name: OTC Model Rule: Distributed Generation Rule

Description:
Adopt OTC Model Rule to Require Additional Controls on Distributed Generation Sources.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	No
Reductions >0.1 tpd	Yes

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require either state-level regulation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- After a rule is adopted, owners of distributed generation equipment will require additional time to install controls.
- Possible adverse impacts.
- Administrative burden may be high due to permitting and registration requirements.
- Year of first benefits is 2009.

Summary Analysis

Not RACM. This measure cannot deliver benefits by May 2008.

Measure -- OTC Model Rule: Peaking Unit Rule

Quick Reference: Peaking Unit Rule
Measure Name: OTC Model Rule: Peaking Unit Rule

Description:
Adopt OTC Model Rule to Require Additional Controls on EGU Peaking Units.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	No
Reductions >0.1 tpd	Yes

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state-level regulation by Maryland, Virginia and the District. All three states require well over 12 months to develop, pass and require compliance with a regulation.
- After a rule is adopted, owners will require additional time to install controls.
- Controls may not be technologically feasible in all cases due to site specific issues.
- There may be potential adverse impacts associated with reliability issues and economic impact on businesses.
- Year of first benefits is 2009.

Summary Analysis

Not RACM. This measure cannot deliver benefits by May 2008.

Measure -- OTC Model Rule: ICI Boiler Standards

Quick Reference: ICI Stds
Measure Name: OTC Model Rule: ICI Boiler Standards

Description:
Adopt OTC Model Rule on Standards for Industrial, Commercial, and Institutional Boilers.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	Yes
No Adverse Impacts	No
Reductions >0.1 tpd	Yes

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require either state-level regulation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- After a rule is adopted, owners will require additional time to install controls.
- Regulating this source could cause potential adverse impacts.
- Year of first benefits is 2009.

Summary Analysis

Not RACM. This measure cannot deliver benefits by May 2008 and may cause adverse financial impacts.

Measure -- Controls on Municipal Solid Waste Incinerators

Quick Reference: MSW
Measure Name: Controls on Municipal Solid Waste Incinerators

Description:
Adopt OTC Model Rule on RACT Update for MSW Incineration Facilities.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	Yes

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require either state-level regulation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Year of first benefits is 2009.
- If promulgated, EPA December 2005 proposed rule will lead to reduced emissions from this source category.

Summary Analysis

Not RACM. This measure cannot deliver benefits by May 2008.

Measure -- Control Portland Cement Facilities

Quick Reference: RACT Cement
Measure Name: Control Portland Cement Facilities

Description:
Adopt OTC Model Rule on RACT Update for Portland Cement Facilities.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	Yes
No Adverse Impacts	No
Reductions >0.1 tpd	Yes

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Measure. All three states require well over 12 months to develop, pass and require compliance with a regulation.
- After a rule is adopted, owners will require additional time to install controls.
- Year of First Benefits is 2009.
- Regulating this source could cause hardship for companies.

Summary Analysis

Not RACM. Will not provide reductions by May 2008. Potential adverse impacts.

Measure -- Mineral Products Industry Controls: Glass and Fiberglass

Quick Reference: Glass Facility **Description:**
Measure Name: Mineral Products Industry Controls: Glass and Fiberglass Control Glass and Fiberglass Facility Emissions.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	Yes
No Adverse Impacts	Yes
Reductions >0.1 tpd	No

Issues

- Considered as a potential mandatory measure.
- Year of First Benefits is unknown.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Will not provide emission reductions. There are no major facilities in the region.

Measure -- Control Asphalt and Concrete Facilities

Quick Reference: Asphalt Facilities
Measure Name: Control Asphalt and Concrete Facilities

Description:
Require NOx emission limits on asphaltic concrete production facilities.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	No
No Adverse Impacts	No
Reductions >0.1 tpd	Yes

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Measure. All three states require well over 12 months to develop, pass and require compliance with a regulation.
- After a rule is adopted, owners will require additional time to install controls.
- Year of First Benefits is 2009.
- Regulating this source could cause hardship for companies.

Summary Analysis

Not RACM. Measure will not provide benefits by May 2008. Potential adverse impacts.

Measure -- Low NOx Fuel Oil for Stationary Sources

Quick Reference: Low Nox Fuel Oil
Measure Name: Low NOx Fuel Oil for Stationary Sources

Description:
Require oil-burning stationary sources to burn ThermaNOx, a low-NOx No. 2 fuel oil emulsion, during ozone season.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	-
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Measure. All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Year of First Benefits is 2009.
- Emissions from EGUs will be regulated under federal and/or state programs.
- Each facility will have flexibility in how they meet mandated emissions levels. This could be one strategy selected, but emission reductions would already be captured under the overall sector approach.

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Upwind NOx Controls: Expand NOx RACT to Upwind Counties

Quick Reference: Upwind NOx RACT
Measure Name: Upwind NOx Controls: Expand NOx RACT to Upwind Counties
RACM Determination: No
Reason: Will not provide reductions by May 2008

Description:
Expand NOx RACT Requirements.

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	-
Economically Feasible	Yes
No Adverse Impacts	Yes
Reductions >0.1 tpd	Yes

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state-level regulation by Virginia, or other upwind states.
- States require well over 12 months to develop, pass and require compliance with a regulation.
- The IAQC is currently evaluating the potential for controls on upwind sources.
- If pursued, upwind sources would need to be added to the emissions inventory.
- This measure could target upwind EGU and/or non-EGU point sources.

Summary Analysis

The IAQC is currently evaluating the potential for controls on upwind sources.

Measure -- Upwind NOx Controls: Plant-by-Plant BACT Controls

Quick Reference:	Upwind NOx BACT	Description:
Measure Name:	Upwind NOx Controls: Plant-by-Plant BACT Controls	Identify and Require Additional Facility-Specific Emission Reduction Technologies.
RACM Determination:	No	
Reason:	Will not provide reductions by May 2008	

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	-
Reductions >0.1 tpd	Yes

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state-level regulation by Virginia, or other upwind states.

- States require well over 12 months to develop, pass and require compliance with a regulation.
- The IAQC is currently evaluating the potential for controls on upwind sources.

- If pursued, upwind sources would need to be added to the emissions inventory.

- This measure could target upwind EGU and/or non-EGU point sources.

Summary Analysis

The IAQC is currently evaluating the potential for controls on upwind sources.

Measure -- Upwind VOC Controls: Expand VOC RACT to Upwind Counties

Quick Reference: Upwind VOC RACT
Measure Name: Upwind VOC Controls: Expand VOC RACT to Upwind Counties
RACM Determination: No
Reason: Will not provide reductions by May 2008

Description:
Expand VOC RACT Requirements.

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	-
Economically Feasible	Yes
No Adverse Impacts	Yes
Reductions >0.1 tpd	Yes

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state-level regulation by Virginia, or other upwind states.
- States require well over 12 months to develop, pass and require compliance with a regulation.
- The IAQC is currently evaluating the potential for controls on upwind sources.
- If pursued, upwind sources would need to be added to the emissions inventory.

Summary Analysis

The IAQC is currently evaluating the potential for controls on upwind sources.

Measure -- Upwind VOC Controls: Plant-by-Plant BACT Controls

Quick Reference:	Upwind VOC BACT	Description:
Measure Name:	Upwind VOC Controls: Plant-by-Plant BACT Controls	Identify and Require Additional Facility-Specific Emission Reduction Technologies.
RACM Determination:	No	
Reason:	Will not provide reductions by May 2008	

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	-
Reductions >0.1 tpd	Yes

Issues

- Mandatory Program. This measure would require state-level regulation by Virginia, or other upwind states.

- States require well over 12 months to develop, pass and require compliance with a regulation.

- The IAQC is currently evaluating the potential for controls on upwind sources.

- If pursued, upwind sources would need to be added to the emissions inventory.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

The IAQC is currently evaluating the potential for controls on upwind sources.

Measure -- Reductions from EGUs Plant RACT/Technology-Based Approach

Quick Reference: EGU RACT
Measure Name: Reductions from EGUs Plant RACT/Technology-Based Approach
RACM Determination: No
Reason: No creditable emission reductions

Description:
Identify and Require Additional Power Plant-Specific Emission Reduction Technologies.

RACM Criterion Summary

Implementation by May 2008	-
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	-
Reductions >0.1 tpd	Yes

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state-level regulation by Maryland, the District, or Virginia, and/or other upwind states.
- States require well over 12 months to develop, pass and require compliance with a regulation.
- The IAQC is currently evaluating the potential for controls on upwind sources.
- If pursued, upwind sources would need to be added to the emissions inventory.

Summary Analysis

- There is no certainty that prescribing a specific technology would reduce emissions below emission allowance levels.
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Measure -- State Multipollutant Legislation

Quick Reference: Multi P Legislation
Measure Name: State Multipollutant Legislation

Description:
Adopt State Multipollutant Legislation.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	Yes
No Adverse Impacts	Yes
Reductions >0.1 tpd	Yes

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require either state-level legislation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with a new law.
- Year of first benefits is 2009.
- Multipollutant Legislation was adopted in Virginia and Maryland during the 2006 legislative session.

Summary Analysis

Not RACM. This measure will not deliver benefits by May 2008.

Measure -- Energy Efficiency Programs

Quick Reference: Energy Efficiency
Measure Name: Energy Efficiency Programs
RACM Determination: No
Reason: Will not advance attainment date

Description:
Increase Adoption of Energy Efficient Technology by Government and the Private Sector with Commensurate Retirement of EGU NOx Allowances.

RACM Criterion Summary

Implementation by May 2008	-
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Voluntary Measure. However, this measure would require state-level regulation by Virginia and the District. In order to take credit for an energy efficiency program, the state must retire NOx Allowances.
- States require well over 12 months to develop, pass and require compliance with a regulation.
- Year of First Benefits is 2007. However, the full benefits of new standards won't be realized until existing equipment in the marketplace is replaced.
- Reductions not greater than 1 tpd if implemented as a voluntary measure.
- Mandatory energy efficiency programs may not be economically feasible.

Summary Analysis

Not RACM. Measure will not advance attainment date.

Measure -- Energy Efficiency: Energy Efficiency Standards

Quick Reference: Efficiency Standards
Measure Name: Energy Efficiency: Energy Efficiency Standards

Description:
 Establish requirements for minimum energy efficiency, with
 Commensurate Retirement of EGU NOx Allowances.

RACM Determination: No
Reason: Will not advance attainment date

RACM Criterion Summary

Implementation by May 2008	-
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory or Voluntary Measure. This measure would require state-level regulation or legislation by Maryland, Virginia and the District to set or modify efficiency standards.
- All three states require well over 12 months to develop, pass and require compliance with new requirements.
- In order to take credit for an energy efficiency program, the state must retire NOx Allowances.
- Year of First Benefits is 2008. However, the full benefits of new standards won't be realized until existing equipment in the marketplace is replaced.
- Reductions not greater than 1 tpd if implemented as a voluntary measure.
- Mandatory energy efficiency programs may not be economically feasible.

Summary Analysis

Not RACM. Measure will not advance attainment date.

Measure -- Energy Efficiency: Green Building Code Program

Quick Reference: Green Building Codes
Measure Name: Energy Efficiency: Green Building Code Program

Description:
 Establish energy efficiency standards for building codes, with
 Commensurate Retirement of EGU NOx Allowances.

RACM Determination: No
Reason: Will not advance attainment date

RACM Criterion Summary

Implementation by May 2008	-
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Voluntary Measure. However, this measure would require local jurisdictions to change building codes to improve building efficiency.
- In order to take credit for an energy efficiency program, states must establish regulations enabling the retirement of NOx Allowances.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Year of First Benefits is unknown at this time. The benefits of this measure will be realized as new commercial and residential buildings are built. The measure would likely not address existing structures.

Summary Analysis

Not RACM. Measure will not advance attainment date.

Measure -- Renewable Energy: Renewable Portfolio Standards

Quick Reference:	Renewable Portfolio	Description:
Measure Name:	Renewable Energy: Renewable Portfolio Standards	Increase Purchases of Renewable Energy by Government and the Private Sector, with Commensurate Retirement of EGU NOx Allowances.
RACM Determination:	No	
Reason:	Will not advance attainment date	

RACM Criterion Summary

Implementation by May 2008	-
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Voluntary Measure. However, this measure would require state governments to establish renewable portfolio standards. Maryland and the District have enacted standards.
- All three states require well over 12 months to develop, pass and require compliance with a regulation. The standards phase in slowly over time.
- In order to take credit for a renewables program, the state must retire NOx Allowances. Currently, only Maryland has a regulation enabling NOx allowance retirement.
- Year of First Benefits is 2008. However, the full benefits of requirements won't be realized until the requirements are phased in.

Summary Analysis

Not RACM. Measure will not advance attainment date.

Measure -- Renewable Energy: Solar Photovoltaic Programs

Quick Reference: Solar Photovoltaics
Measure Name: Renewable Energy: Solar Photovoltaic Programs
RACM Determination: No
Reason: Will not advance attainment date

Description:
Increase Purchases and Installation of Renewable Energy sources by Government and the Private Sector, with Commensurate Retirement of EGU NOx Allowances. Consider Incentive Programs.

RACM Criterion Summary

Implementation by May 2008	-
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Voluntary Measure. However, this measure would require state governments to develop regulations to retire NOx Allowances. Currently, only Maryland has a regulation enabling NOx allowance retirement.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Year of First Benefits is 2007. However, the full benefits of requirements won't be realized until a significant number are installed.

Summary Analysis

Not RACM. Measure will not advance attainment date.

Measure -- Renewable Energy: Wind Energy Purchases

Quick Reference: Wind Energy
Measure Name: Renewable Energy: Wind Energy Purchases

Description:
Increase Purchases of Renewable Energy by Government and the Private Sector, with Commensurate Retirement of EGU NOx Allowances.

RACM Determination: No
Reason: Will not advance attainment date

RACM Criterion Summary

Implementation by May 2008	-
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	No
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Voluntary Measure. This measure would require state governments to develop regulations to retire NOx Allowances. Currently, only Maryland has necessary regulations in place.
- States require well over 12 months to develop, pass and require compliance with a regulation.
- The cost effectiveness of wind energy purchases is >\$10,000/ton.
- Year of First Benefits is 2007.

Summary Analysis

Not RACM. Measure will not advance attainment date.

Measure -- Renewable Energy: Solar Hot Water Heating

Quick Reference: Solar Hot Water
Measure Name: Renewable Energy: Solar Hot Water Heating

Description:
Increase Use of Solar Hot Water Heating by Government and the Private Sector, with Commensurate Retirement of EGU NOx Allowances.

RACM Determination: No
Reason: Will not advance attainment date

RACM Criterion Summary

Implementation by May 2008	-
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Voluntary Measure. This measure would require state governments to develop regulations to retire NOx Allowances. Currently, only Maryland has necessary regulations in place.
- States require well over 12 months to develop, pass and require compliance with a regulation.
- Year of First Benefits is 2007.

Summary Analysis

Not RACM. Measure will not advance attainment date.

Measure -- Energy Efficiency: Ground Source Heat Pump Initiative

Quick Reference:	Heat Pumps	Description:
Measure Name:	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.
RACM Determination:	No	
Reason:	Will not advance attainment date	

RACM Criterion Summary

Implementation by May 2008	-
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Issues

- Voluntary Measure. This measure would require state governments to develop regulations to retire NOx Allowances. Currently, only Maryland has necessary regulations in place.
- States require well over 12 months to develop, pass and require compliance with a regulation.
- Year of First Benefits is 2007.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Measure will not advance attainment date.

Measure -- Energy Efficiency Programs: LED Traffic Signal Retrofit Program

Quick Reference: LED Traffic **Description:**
Measure Name: Energy Efficiency Programs: LED Traffic Signal Retrofit Program Increase Use Energy Efficient LED Traffic Signals.
RACM Determination: No
Reason: Will not advance attainment date

RACM Criterion Summary

Implementation by May 2008	-
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	Yes
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Voluntary Measure. However, this measure would require state governments to develop regulations to retire NOx Allowances. Currently, only Maryland has necessary regulations in place.
- States require well over 12 months to develop, pass and require compliance with a regulation.
- Year of First Benefits is 2007.

Summary Analysis

Not RACM. Measure will not advance attainment date.

Measure -- Energy Efficiency Programs: LED Street Light Retrofit Program

Quick Reference: LED Street **Description:**
Measure Name: Energy Efficiency Programs: LED Street Light Retrofit Program Increase Use of Energy Efficient LED Street Lights.
RACM Determination: No
Reason: Will not advance attainment date

RACM Criterion Summary

Implementation by May 2008	-
Enforceable	Yes
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Voluntary Measure. However, this measure would require state governments to develop regulations to retire NOx Allowances. Currently, only Maryland has necessary regulations in place.
- States require well over 12 months to develop, pass and require compliance with a regulation.
- Year of First Benefits is unknown at this time. Unclear if the technology will be available before 2008.

Summary Analysis

Not RACM. Measure will not advance attainment date.

Measure -- Energy Efficiency: Energy Star Exit Signs

Quick Reference: EStar Exit
Measure Name: Energy Efficiency: Energy Star Exit Signs

Description:
Increase market penetration of Energy Efficient Lighting (EXIT Signs).

RACM Determination: No
Reason: Will not advance attainment date

RACM Criterion Summary

Implementation by May 2008	-
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Issues

- Voluntary Measure. However, this measure would require state governments to develop regulations to retire NOx Allowances. Currently, only Maryland has necessary regulations in place.
- States require well over 12 months to develop, pass and require compliance with a regulation.
- Year of First Benefits is 2007.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Measure will not advance attainment date.

Measure -- Energy Efficiency: Energy Performance Contracting Program

Quick Reference: Performance Contracting
Measure Name: Energy Efficiency: Energy Performance Contracting Program
RACM Determination: No
Reason: Will not advance attainment date

Description:
 Increase Use of Energy Performance Contracts in the Public and/or Private sector to Reduce Energy Consumption, with Commensurate Retirement of EGU NOx Allowances.

RACM Criterion Summary

Implementation by May 2008	-
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Voluntary Measure. This measure would require state governments to develop regulations to retire NOx Allowances. Currently, only Maryland has necessary regulations in place.
- States require well over 12 months to develop, pass and require compliance with a regulation.
- Year of First Benefits is 2007.

Summary Analysis

Not RACM. Measure will not advance attainment date.

Measure -- Enhanced Enforcement/Rule Compliance at Existing Stationary Sources

Quick Reference: Enhanced Enforce Stationary
Measure Name: Enhanced Enforcement/Rule Compliance at Existing Stationary Sources
RACM Determination: No
Reason: No creditable emission reductions

Description:
Step up enforcement of and compliance with existing rules for emissions control by stationary sources.

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	No
No Adverse Impacts	Yes
Reductions >0.1 tpd	No

Issues

- Stationary sources in the nonattainment area are generally in compliance with all emissions regulations.
- It is anticipated that no creditable emissions reductions would result from implementation of this measure.
- Year of First Benefits is 2008.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No additional emissions reductions are anticipated to result from adoption of this measure. The measure would not advance the attainment date.

Measure -- Episodic Mandatory Facility Reductions

Quick Reference: Episodic Reductions
Measure Name: Episodic Mandatory Facility Reductions

Description:
Require mandatory facility reductions on Air Quality Action Days.
Require Curtailment Plan.

RACM Determination: No
Reason: No creditable emission reductions

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	No
Reductions >0.1 tpd	No

Issues

- Mandatory Measure, implemented as an episodic measure.
- States require well over 12 months to develop, pass and require compliance with a regulation.
- Year of First Benefits is 2009.
- Potential adverse impacts.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emissions reductions are anticipated to result from adoption of this measure.

Measure -- Chemical Industry Controls

Quick Reference: Chemical Ind Controls
Measure Name: Chemical Industry Controls

Description:
Reduce upwind NOx emissions limits in the manufacture of chemicals.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	-
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state-level regulation by Virginia, or other upwind states.
- States require well over 12 months to develop, pass and require compliance with a regulation.
- The IAQC is currently evaluating the potential for controls on upwind sources.
- If pursued, upwind sources would need to be added to the emissions inventory.
- Year of First Benefits is unknown at this time.

Summary Analysis

More information is needed on the emissions and opportunities for emission reduction from the chemical industry upwind of the region.

Measure -- Clear Skies Act

Quick Reference: Clear Skies
Measure Name: Clear Skies Act

Description:
Implement Clear Skies Legislation.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	Yes
No Adverse Impacts	Yes
Reductions >0.1 tpd	Yes

Issues

· Mandatory Measure. EPA and/or the States would need to develop regulations to implement a Congressionally mandated program.

· Year of First Benefits is unknown at this time. This measure requires Congressional action. Not clear if legislation would be passed prior to May 2008.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Requires federal legislation. Will not provide reductions by May 2008.

Measure -- Forest Product Industry Controls

Quick Reference: Forest Products
Measure Name: Forest Product Industry Controls

Description:
Control Upwind Wood, Paper and Pulp Production Emissions.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	-
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state-level regulation by Virginia, or other upwind states.
- States require well over 12 months to develop, pass and require compliance with a regulation.
- The IAQC is currently evaluating the potential for controls on upwind sources.
- If pursued, upwind sources would need to be added to the emissions inventory.
- Year of First Benefits is unknown at this time.

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Metallurgical Industry Controls: Iron and Steel

Quick Reference: Upwind Iron and Steel
Measure Name: Metallurgical Industry Controls: Iron and Steel
Description: Control Upwind Iron and Steel Production Emissions.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	-
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state-level regulation by Virginia, or other upwind states.
- States require well over 12 months to develop, pass and require compliance with a regulation.
- The IAQC is currently evaluating the potential for controls on upwind sources.
- If pursued, upwind sources would need to be added to the emissions inventory.
- Year of First Benefits is unknown at this time.

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Metallurgical Industry Controls: Lead

Quick Reference: Upwind Lead
Measure Name: Metallurgical Industry Controls: Lead
Description: Control Upwind Lead Smelter Emissions.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	-
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state-level regulation by Virginia, or other upwind states.
- States require well over 12 months to develop, pass and require compliance with a regulation.
- The IAQC is currently evaluating the potential for controls on upwind sources.
- If pursued, upwind sources would need to be added to the emissions inventory.
- Year of First Benefits is unknown at this time.

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Metallurgical Industry Controls: Aluminum

Quick Reference: Upwind Aluminum
Measure Name: Metallurgical Industry Controls: Aluminum

Description:
Control Upwind Aluminum Production Emissions.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	-
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state-level regulation by Virginia, or other upwind states.
- States require well over 12 months to develop, pass and require compliance with a regulation.
- The IAQC is currently evaluating the potential for controls on upwind sources.
- If pursued, upwind sources would need to be added to the emissions inventory.
- Year of First Benefits is unknown at this time.

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Metallurgical Industry Controls: Zinc/Copper

Quick Reference: Upwind Zinc
Measure Name: Metallurgical Industry Controls: Zinc/Copper

Description:
Control Upwind Zinc/Copper Smelter Emissions.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	-
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state-level regulation by Virginia, or other upwind states.
- States require well over 12 months to develop, pass and require compliance with a regulation.
- The IAQC is currently evaluating the potential for controls on upwind sources.
- If pursued, upwind sources would need to be added to the emissions inventory.
- Year of First Benefits is unknown at this time.

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Mineral Products Industry Controls: Lime

Quick Reference: Upwind Lime
Measure Name: Mineral Products Industry Controls: Lime
Description: Control Upwind Lime Facility Emissions.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	-
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state-level regulation by Virginia, or other upwind states.
- States require well over 12 months to develop, pass and require compliance with a regulation.
- The IAQC is currently evaluating the potential for controls on upwind sources.
- If pursued, upwind sources would need to be added to the emissions inventory.
- Year of First Benefits is unknown at this time.

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Mineral Products Industry Controls: Phosphate

Quick Reference: Upwind Phosphate
Measure Name: Mineral Products Industry Controls: Phosphate

Description:
Control Upwind Phosphate Rock Plant Emissions.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	-
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state-level regulation by Virginia, or other upwind states.
- States require well over 12 months to develop, pass and require compliance with a regulation.
- The IAQC is currently evaluating the potential for controls on upwind sources.
- If pursued, upwind sources would need to be added to the emissions inventory.
- Year of First Benefits is unknown at this time.

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Control VOC Emissions from Chemical Manufacturing

Quick Reference: Chem VOC
Measure Name: Control VOC Emissions from Chemical Manufacturing
RACM Determination: No
Reason: Will not provide reductions by May 2008

Description:
 Chemical Manufacturing: More stringent standards on the manufacture of polystyrene, formica, polyester resin, wood and paper, other polymers, pharmaceuticals, paints, varnishes, soaps, detergents, inks, solvents, fuel additives, acids, fertilizers, and resins.

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	No
Reductions >0.1 tpd	No

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Measure. All three states require well over 12 months to develop, pass and require compliance with a regulation.
- After a rule is adopted, owners will require additional time to install controls.
- Year of First Benefits is 2009.
- Potential adverse impacts.

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Upwind RACT Update: Refineries

Quick Reference: RACT Refineries
Measure Name: Upwind RACT Update: Refineries

Description:
Update RACTs for Refineries in Upwind Contributing Areas.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	Yes

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- This measure would require state-level regulation by upwind states.
- States require well over 12 months to develop, pass and require compliance with a regulation.
- The IAQC is currently evaluating the potential for controls on upwind sources.
- If pursued, upwind sources would need to be added to the emissions inventory.
- Year of First Benefits is 2009.

Summary Analysis

Not RACM. No creditable emission reductions. Will not provide reductions by 2008.

Measure -- Statewide Emission Registration Program

Quick Reference: Emission Registration
Measure Name: Statewide Emission Registration Program

Description:
Require a mandatory statewide registration program for all NOx and VOC emission sources.

RACM Determination: No
Reason: Not economically feasible

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	No
No Adverse Impacts	No
Reductions >0.1 tpd	Yes

Issues

- Mandatory Program. States require well over 12 months to develop, pass and require compliance with a regulation.
- Costs to administer a registration program may be prohibitive.
- Year of First Benefits is unknown at this time.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Will not provide reductions by 2008. Will not advance attainment date. May not be economically feasible due to administrative costs.

Measure -- Emission Reduction Credit Retirement Program

Quick Reference: Credit Retirement
Measure Name: Emission Reduction Credit Retirement Program

Description:
Establish program to retire emission reduction credits for stationary sources.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	Yes
No Adverse Impacts	-
Reductions >0.1 tpd	Yes

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require either state-level legislation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with a new law.
- Year of first benefits is unknown at this time. Could be available by May 2008.
- Potential adverse impacts.

Summary Analysis

Not RACM. Will not advance attainment date. Potential adverse impacts.

Measure -- Local Cap and Trade Program

Quick Reference: Local Cap Trade
Measure Name: Local Cap and Trade Program

Description:
Implement cap and trade program for VOC sources in region.
Consider California RECLAIM program.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	No
Reductions >0.1 tpd	Yes

Issues

- Mandatory Program. States require well over 12 months to develop, pass and require compliance with a regulation.
- Costs to administer a small-scale VOC cap and trade program may be prohibitive.
- Year of First Benefits is unknown at this time.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Will not advance attainment date. May not be economically feasible due to administrative costs. Will not provide reductions by May 2008.

Appendix

Analysis of Potential Area Source Measures

*** * *DRAFT March 15, 2007* * ***

Potential Area Source RACM Measures in the Metropolitan Washington Region			
Measure Name	Definition	RACM	Reason
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	Will not provide reductions by May 2008
Expand Coverage of OTC Consumer Products Rule (Phase II)	Expand Number of Products Covered by OTC Consumer Product Rule. Require Lower VOC Content of Products Already Covered.	No	Will not provide reductions by May 2008
RACT Update: Control Industrial Incineration	Implement programs to reduce emissions from industrial incineration.	No	Will not provide reductions by May 2008
Home Heating Oil Standards	Adopt OTC model rule on standards for home heating oils.	No	Will not provide reductions by May 2008
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).	No	De minimis
Control Landfills and Wastewater Facilities	Reduce the NOx and VOC emission limits for flares.	No	De minimis
Expand Seasonal Open Burning Restrictions	Expand prohibitions on seasonal open burning.	No	No creditable reductions
Control Restaurant Sources	Implement programs to reduce emissions from restaurants, including charbroil operations and deep fat fryers.	No	Will not provide reductions by May 2008
Control Bakeries	Adopt SCAQMD Rule 1153: Commercial Bakery Ovens. Reduce exemption level and set standards for unregulated bakeries.	No	Will not provide reductions by May 2008
Control Drycleaning Facilities	Ban transfer systems in Petroleum Dry Cleaning.	No	Will not provide reductions by May 2008
"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.	No	No creditable emission reduction
Control Agricultural Sources	Encourage agricultural best practices, including those that reduce pesticide use.	No	No creditable emission reduction
Control Fermentation Sources (wineries/breweries)	Reduce evaporative VOC emissions from the fermentation process at wineries and/or breweries.	No	Will not provide reductions by May 2008
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.	No	Will not provide reductions by May 2008
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.	No	Will not provide reductions by May 2008
Control VOC Emissions from Construction and Maintenance	Reduce VOC emissions from roofing kettles.	No	Will not provide reductions by May 2008
Control VOC Content of Adhesives and Sealants	Adopt OTC Model Rule. Reduce VOC limits for adhesives and sealants.	No	Will not provide reductions by May 2008
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	De minimis
Low-Emission Natural Gas Water Heaters	Adopt SCAQMD Rule 1121: Control of NOx from Residential Type Natural Gas Fired Water Heaters.	No	De minimis
Control Residential Wood Burning	Implement voluntary program to reduce emissions from wood-burning fireplaces and wood stoves.	No	No creditable emission reduction
Green Procurement Policy	Establish procurement policies that foster emission reduction (paints, solvents, coatings, asphalt, roofs, building materials, AFVs, EE office equipment, ULSD).	No	No creditable emission reduction
Mitigation Fees: Preempted Sources	Charge emission mitigation fee to federally preempted sources.	No	Will not provide reductions by May 2008

Control Growth and Development: Land Use Restrictions	Implement land use restrictions to control residential, commercial, and industrial development in the nonattainment area.	No	No creditable reductions
Control Growth and Development: Mitigate New Development	Mitigate emissions from new development.	No	No creditable reductions
Urban Heat Island Mitigation	Develop programs to mitigate urban heat islands, including tree & vegetation expansion, green roofs, and cool pavements.	No	No creditable emission reduction
Enhanced Enforcement of Area Source Regs: Open Burning	Enhance enforcement of seasonal open burning restrictions.	No	No creditable emission reductions
Enhanced Enforcement of Area Source Regs: Solvent Cleaning	Enhance enforcement of surface cleaning rules.	No	No creditable emission reductions
Enhanced Enforcement: Environmental Partnerships/Pollution Prevention Initiatives	Voluntary compliance audits, encourage low emitting technology (swap out solvent machines)	No	No creditable emission reductions
Episodic Area Source Measures	Measures could include a variety of programs including Air Quality Action Days, no fuels policy, no mow policy, public outreach and education, best practices, etc.	No	No creditable emission reduction
Expand OTC AIMS Rule	Expand OTC AIMS Rule to Upwind Counties.	No	Will not provide reductions by May 2008
Expand OTC Consumer Products Rule	Expand OTC Consumer Product Rule to Upwind Counties.	No	Will not provide reductions by May 2008
Expand OTC Mobile Equipment Repair and Refinishing Rule	Expand OTC Mobile Equipment Repair and Refinishing Rule to Upwind Counties.	No	Will not provide reductions by May 2008
Expand OTC Portable Fuel Containers Rule	Expand OTC Portable Fuel Containers Rule to Upwind Counties.	No	Will not provide reductions by May 2008
Expand OTC Solvent Cleaning Rule	Expand OTC Solvent Cleaning Rule to Upwind Counties.	No	Will not provide reductions by May 2008
Upwind Fuels Controls	Expand Use of Reformulated Gasoline to Upwind Counties. Consider OTC Regional Fuels Initiative.	No	Will not provide reductions by May 2008
Expand Stage I Vapor Recovery	Expand Requirements for Stage I Vapor Recovery to Upwind Counties.	No	Will not provide reductions by May 2008
Expand Stage II Vapor Recovery	Expand requirements for Stage II Vapor Recovery to Upwind Counties.	No	Will not provide reductions by May 2008
Control Upwind Port Emissions	Pursue approaches to reduce land-based port emissions.	No	Will not provide reductions by May 2008

Measure -- Expand Coverage of OTC Consumer Products Rule (Phase II)

Quick Reference: CP Phase II
Measure Name: Expand Coverage of OTC Consumer Products Rule (Phase II)
RACM Determination: No
Reason: Will not provide reductions by May 2008

Description:
Expand Number of Products Covered by OTC Consumer Product Rule. Require Lower VOC Content of Products Already Covered.

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	-
Reductions >0.1 tpd	Yes

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state-level regulation by Maryland, Virginia and the District. Additional regulations on this source may require complex negotiations with industry stakeholders.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- After a rule is adopted, manufacturers will require additional time to produce and distribute new compliant products.
- Year of First Benefits is 2009. However, the full benefits of new standards won't be realized until existing product inventories are sold and new products enter the market.
- Potential products: aerosols, inks, lubricants, etc. Feasibility and impacts vary by product.

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Expand Coverage of OTC AIMS Rule (Phase II)

Quick Reference: AIMS Phase II
Measure Name: Expand Coverage of OTC AIMS Rule (Phase II)
RACM Determination: No
Reason: Will not provide reductions by May 2008

Description:
Expand Number of Products Covered by OTC AIMS Rule. Require Lower VOC Content of Products Already Covered.

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	-
Reductions >0.1 tpd	Yes

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state-level regulation by Maryland, Virginia and the District. Additional regulations on this source may require complex negotiations with industry stakeholders.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- After a rule is adopted, manufacturers will require additional time to produce and distribute new compliant products.
- Year of First Benefits is 2009. However, the full benefits of new standards won't be realized until existing product inventories are sold and new products enter the market.
- Potential products: marine coatings, industrial maintenance coatings, wood coatings, etc. Feasibility and impacts vary by product.

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Control VOC Content of Adhesives and Sealants

Quick Reference: Adhesives Sealants
Measure Name: Control VOC Content of Adhesives and Sealants

Description:
Adopt OTC Model Rule. Reduce VOC limits for adhesives and sealants.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	-
Reductions >0.1 tpd	Yes

Issues

- Mandatory Program. This measure would require state governments to develop regulations affecting adhesives and sealants.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Year of first benefits is 2009.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Will not provide reductions by 2008.

Measure -- Home Heating Oil Standards

Quick Reference: Heating Oil Stds
Measure Name: Home Heating Oil Standards

Description:
Adopt OTC model rule on standards for home heating oils.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	-
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state-level regulation by Maryland, Virginia and the District. Regulating regional fuel markets may pose difficult challenges.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Emission reduction potential during the ozone season may need further evaluation. May be candidate as a PM measure.
- Potential Adverse impacts.
- Year of First Benefits is 2009.

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- RACT Update: Control Industrial Incineration

Quick Reference: RACT Incineration
Measure Name: RACT Update: Control Industrial Incineration

Description:
Implement programs to reduce emissions from industrial incineration.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	-
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state-level regulation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- This measure needs to be considered in light of potential new measures on larger incineration sources included in the stationary source inventory.
- The technological and economic feasibility of controlling smaller incineration sources and the potential for adverse impacts is not known at this time.
- Year of First Benefits is 2009.

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Mitigation Fees: Preempted Sources

Quick Reference: Mitigation Fees
Measure Name: Mitigation Fees: Preempted Sources

Description:
Charge emission mitigation fee to federally preempted sources.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	-
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Issues

- State and local governments are preempted from regulating certain sources, including locomotives, heavy duty diesel construction equipment, and aircraft.
- States require well over 12 months to develop, pass and require compliance with a regulation.
- It is not clear what authority states would have to implement a fee program.

- Year of First Benefits is unknown at this time.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reduction. Will not provide reductions by May 2008.

Measure -- "Cash for Clunkers" Gasoline Containers Replacement Program

Quick Reference: Gas Can Replacement

Measure Name: "Cash for Clunkers" Gasoline Containers Replacement Program

RACM Determination: No

Reason: No creditable emission reduction

Description:

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.

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	No

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Voluntary Program.
- Gas can replacements would speed the transition to newer lower emitting containers.
- Emission reductions from new gasoline containers may already be credited under the OTC model rule for portable fuel containers.
- Year of first benefits is 2006, 2007, or 2008.

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Low-Emission Asphalt

Quick Reference: Asphalt
Measure Name: Low-Emission Asphalt
RACM Determination: No
Reason: De minimis

Description:
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).

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	No

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state-level regulation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- The region already regulates asphalt application. Emissions from this source are very low.
- Asphalt emissions in the region are only [0.025] tpd, which is below the *de minimis* threshold of 0.1 tpd
- Year of first benefits is 2009.

Summary Analysis

Emissions from asphalt paving do not exceed the *de minimis* threshold. Therefore this measure is not a RACM.

Measure -- Control Landfills and Wastewater Facilities

Quick Reference: Flaring
Measure Name: Control Landfills and Wastewater Facilities

Description:
Reduce the NOx and VOC emission limits for flares.

RACM Determination: No
Reason: De minimis

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	No
No Adverse Impacts	Yes
Reductions >0.1 tpd	No

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state-level regulation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- The technological and economic feasibility is not known at this time.
- Year of first benefits is 2009.

Summary Analysis

Not RACM. Will not provide reductions by 2008. Potential emission reductions are *de minimis*.

Measure -- Expand Seasonal Open Burning Restrictions

Quick Reference: Open Burning
Measure Name: Expand Seasonal Open Burning Restrictions
Description: Expand prohibitions on seasonal open burning.

RACM Determination: No
Reason: No creditable reductions

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	Yes
No Adverse Impacts	Yes
Reductions >0.1 tpd	No

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state-level regulation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- There would be no ozone-season reductions associated with this measure. The measure would expand existing ozone-season regulations year-round.
- Year of first benefits is 2009.

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Control Bakeries

Quick Reference: Bakeries
Measure Name: Control Bakeries

Description:
Adopt SCAQMD Rule 1153: Commercial Bakery Ovens. Reduce exemption level and set standards for unregulated bakeries.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	No
No Adverse Impacts	No
Reductions >0.1 tpd	No

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state governments to develop regulations affecting bakeries.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- This measure would affect not only large bakeries categorized as stationary sources, but also many smaller bakeries classified as area sources. As such, this measure has the potential to financially impact small businesses.
- Year of first benefits is 2009.

Summary Analysis

Not RACM. Will not provide reductions by 2008. Not economically feasible. Potential emission reductions are *de minimis*. Potential adverse impacts.

Measure -- Control Restaurant Sources

Quick Reference: Restaurants
Measure Name: Control Restaurant Sources
RACM Determination: No
Reason: Will not provide reductions by May 2008

Description:
Implement programs to reduce emissions from restaurants, including charbroil operations and deep fat fryers.

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	No
No Adverse Impacts	No
Reductions >0.1 tpd	No

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state governments to develop regulations affecting restaurants.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Year of first benefits is 2009.
- This measure has the potential to financially impact small businesses.

Summary Analysis

Not RACM. Will not provide reductions by 2008. Not economically feasible. Potential emission reductions are *de minimis*. Potential adverse impacts.

Measure -- Control Drycleaning Facilities

Quick Reference: Drycleaning
Measure Name: Control Drycleaning Facilities

Description:
Ban transfer systems in Petroleum Dry Cleaning.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	No
Reductions >0.1 tpd	Yes

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state governments to develop regulations affecting drycleaning operations.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Year of first benefits is 2009.
- This measure has the potential to financially impact small businesses.

Summary Analysis

Not RACM. Will not provide reductions by 2008. Potential adverse impacts.

Measure -- Control Agricultural Sources

Quick Reference: Ag Best Practices
Measure Name: Control Agricultural Sources
RACM Determination: No
Reason: No creditable emission reduction

Description:
Encourage agricultural best practices, including those that reduce pesticide use.

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	No
Reductions >0.1 tpd	Yes

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

· Voluntary Program. This measure would require new innovative programs to reduce emissions from the agricultural sector.

· This measure may be more applicable in rural counties outside the nonattainment area.

· Year of first benefits is 2007.

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Control Fermentation Sources (wineries/breweries)

Quick Reference: Wineries
Measure Name: Control Fermentation Sources (wineries/breweries)
RACM Determination: No
Reason: Will not provide reductions by May 2008

Description:
Reduce evaporative VOC emissions from the fermentation process at wineries and/or breweries.

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	No
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state governments to develop regulations affecting wineries.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- This measure has the potential to financially impact small businesses.
- Year of first benefits is 2009.

Summary Analysis

Not RACM. Will not provide reductions by 2008.

Measure -- Control Wastewater Treatment Facilities

Quick Reference: Wastewater Treatment
Measure Name: Control Wastewater Treatment Facilities
RACM Determination: No
Reason: Will not provide reductions by May 2008

Description:
Require capture and control of VOC emissions from facilities treating industrial wastewater and domestic sewage. Adopt SCAQMD Rule 1176: Sumps and Wastewater Separators.

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	No
Reductions >0.1 tpd	-

Issues

- Mandatory Program. This measure would require state governments to develop regulations affecting wastewater treatment facilities.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Year of first benefits is 2009.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Will not provide reductions by 2008.

Measure -- Control VOC Emissions from Fuel Facilities

Quick Reference: Fuel Facilities
Measure Name: Control VOC Emissions from Fuel Facilities
RACM Determination: No
Reason: Will not provide reductions by May 2008

Description:
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.

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	No
Reductions >0.1 tpd	Yes

Issues

- Mandatory Program. This measure would require state governments to develop regulations on fuel distribution facilities.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Year of first benefits is 2009.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Will not provide reductions by 2008.

Measure -- Control VOC Emissions from Construction and Maintenance

Quick Reference: Construction Maintenance
Measure Name: Control VOC Emissions from Construction and Maintenance

Description:
Reduce VOC emissions from roofing kettles.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	No
Economically Feasible	No
No Adverse Impacts	No
Reductions >0.1 tpd	-

Issues

- Mandatory Program. This measure would require state governments to develop regulations affecting roofing kettles.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Year of first benefits is 2009.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Will not provide reductions by 2008. Potential adverse impacts. Not economically feasible.

Measure -- Low-Emission Natural Gas Furnaces

Quick Reference: Nat Gas Furnace
Measure Name: Low-Emission Natural Gas Furnaces
RACM Determination: No
Reason: De minimis

Description:
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).

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	Yes
No Adverse Impacts	No
Reductions >0.1 tpd	No

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state-level regulation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Any regulation creating more stringent emission limits would be controversial.
- Year of first benefits is 2009.

Summary Analysis

Not RACM. Will not provide reductions by 2008. Potential adverse impacts. Potential emission reductions are *de minimis*.

Measure -- Low-Emission Natural Gas Water Heaters

Quick Reference: Nat Gas Water Heaters
Measure Name: Low-Emission Natural Gas Water Heaters

Description:
Adopt SCAQMD Rule 1121: Control of NOx from Residential Type Natural Gas Fired Water Heaters.

RACM Determination: No
Reason: De minimis

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	Yes
No Adverse Impacts	No
Reductions >0.1 tpd	No

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state-level regulation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Any regulation creating more stringent emission limits would be controversial.
- Year of first benefits is 2009.

Summary Analysis

Not RACM. Will not provide reductions by 2008. Potential adverse impacts. Potential emission reductions are *de minimis*.

Measure -- Control Residential Wood Burning

Quick Reference: Res Wood Burning
Measure Name: Control Residential Wood Burning

Description:
Implement voluntary program to reduce emissions from wood-burning fireplaces and wood stoves.

RACM Determination: No
Reason: No creditable emission reduction

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	No

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Voluntary Program. This measure would involve swapping out old stoves with new low-emitting technology.
- Ozone season emission reductions may be minimal. Candidate as a PM measure.
- Year of first benefits is 2009.

Summary Analysis

Not RACM. No creditable emission reduction.

Measure -- Control Growth and Development: Land Use Restrictions

Quick Reference: Restrict Land Use

Measure Name: Control Growth and Development: Land Use Restrictions

Description:

Implement land use restrictions to control residential, commercial, and industrial development in the nonattainment area.

RACM Determination: No

Reason: No creditable reductions

RACM Criterion Summary

Implementation by May 2008	-
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	No
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

· Voluntary Program. This measure would require jurisdictions in the region to implement land use controls that reduce emissions.

· Aspects of this measure may be considered Transportation Emission Reduction Measures.

· Year of first benefits is 2007.

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Control Growth and Development: Mitigate New Development

Quick Reference: Development Mitigation
Measure Name: Control Growth and Development: Mitigate New Development
RACM Determination: No
Reason: No creditable reductions

Description:
Mitigate emissions from new development.

RACM Criterion Summary

Implementation by May 2008	-
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	No
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Voluntary Program. This measure would require jurisdictions in the region to implement a program that requires developers to mitigate emissions from new development.
- Aspects of this measure may be considered Transportation Emission Reduction Measures.
- Consider implementing a public benefits fee on new construction permits to fund emission reduction projects.
- Year of first benefits is 2007.

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Urban Heat Island Mitigation

Quick Reference: Urban Heat Island
Measure Name: Urban Heat Island Mitigation
RACM Determination: No
Reason: No creditable emission reduction

Description:
Develop programs to mitigate urban heat islands, including tree & vegetation expansion, green roofs, and cool pavements.

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	No

Issues

- Voluntary measure. May be included as part of the Innovative Measures Bundle.
- Year of first benefits is unknown at this time.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Episodic Area Source Measures

Quick Reference: Episodic Measures
Measure Name: Episodic Area Source Measures
RACM Determination: No
Reason: No creditable emission reduction

Description:
Measures could include a variety of programs including Air Quality Action Days, no fuels policy, no mow policy, public outreach and education, best practices, etc.

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	Yes
No Adverse Impacts	Yes
Reductions >0.1 tpd	Yes

- Voluntary measure. May be included as part of the Innovative Measures Bundle.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Episodic measures have been adopted and are being implemented in the Washington region.

Measure -- Green Procurement Policy

Quick Reference: Procurement
Measure Name: Green Procurement Policy
RACM Determination: No
Reason: No creditable emission reduction

Description:
Establish procurement policies that foster emission reduction (paints, solvents, coatings, asphalt, roofs, building materials, AFVs, EE office equipment, ULSD).

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Issues

- Voluntary measure. May be included as part of the Innovative Measures Bundle.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reduction.

Measure -- Enhanced Enforcement of Area Source Regs: Open Burning

Quick Reference: Enforce Open Burning **Description:**
Measure Name: Enhanced Enforcement of Area Source Regs: Open Burning **Description:** Enhance enforcement of seasonal open burning restrictions.
RACM Determination: No
Reason: No creditable emission reductions

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	No

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Because no additional emissions reductions are anticipated to result from adoption of this measure, the measure would not advance attainment and is not RACM.

Measure -- Enhanced Enforcement of Area Source Regs: Solvent Cleaning

Quick Reference: Enforce Solvent Cleaning **Description:**
Measure Name: Enhanced Enforcement of Area Source Regs: Solvent Cleaning Enhance enforcement of surface cleaning rules.
RACM Determination: No
Reason: No creditable emission reductions

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	No

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Because no additional emissions reductions are anticipated to result from adoption of this measure, the measure would not advance attainment and is not RACM.

Measure -- Enhanced Enforcement: Environmental Partnerships/Pollution Prevention Initiatives

Quick Reference: Compliance Audits
Measure Name: Enhanced Enforcement: Environmental Partnerships/Pollution Prevention Initiatives

Description:
Voluntary compliance audits, encourage low emitting technology (swap out solvent machines)

RACM Determination: No
Reason: No creditable emission reductions

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	No

- Voluntary measure. May be included as part of the Innovative Measures Bundle.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Because no additional emissions reductions are anticipated to result from adoption of this measure, the measure would not advance attainment and is not RACM.

Measure -- Expand OTC AIMs Rule

Quick Reference: Upwind AIMs
Measure Name: Expand OTC AIMs Rule

Description:
Expand OTC AIMs Rule to Upwind Counties.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	Yes
No Adverse Impacts	Yes
Reductions >0.1 tpd	Yes

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state-level regulation by Virginia, or other upwind states.
- States require well over 12 months to develop, pass and require compliance with a regulation.
- If pursued, upwind sources would need to be added to the emissions inventory.
- Year of first benefits is unknown at this time.

Summary Analysis

No. Will not provide reductions by May 2008.

Measure -- Expand OTC Consumer Products Rule

Quick Reference: Upwind Consumer Products
Measure Name: Expand OTC Consumer Products Rule

Description:
Expand OTC Consumer Product Rule to Upwind Counties.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	Yes
No Adverse Impacts	Yes
Reductions >0.1 tpd	Yes

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state-level regulation by Virginia, or other upwind states.
- States require well over 12 months to develop, pass and require compliance with a regulation.
- If pursued, upwind sources would need to be added to the emissions inventory.
- Year of first benefits is unknown at this time.

Summary Analysis

No. Will not provide reductions by May 2008.

Measure -- Expand OTC Mobile Equipment Repair and Refinishing Rule

Quick Reference: Upwind MERR
Measure Name: Expand OTC Mobile Equipment Repair and Refinishing Rule
RACM Determination: No
Reason: Will not provide reductions by May 2008

Description:
Expand OTC Mobile Equipment Repair and Refinishing Rule to Upwind Counties.

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	Yes
No Adverse Impacts	Yes
Reductions >0.1 tpd	Yes

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state-level regulation by Virginia, or other upwind states.
- States require well over 12 months to develop, pass and require compliance with a regulation.
- If pursued, upwind sources would need to be added to the emissions inventory.
- Year of first benefits is unknown at this time.

Summary Analysis

No. Will not provide reductions by May 2008.

Measure -- Expand OTC Solvent Cleaning Rule

Quick Reference: Upwind Solvent Cleaning
Measure Name: Expand OTC Solvent Cleaning Rule

Description:
Expand OTC Solvent Cleaning Rule to Upwind Counties.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	Yes
No Adverse Impacts	Yes
Reductions >0.1 tpd	Yes

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state-level regulation by Virginia, or other upwind states.
- States require well over 12 months to develop, pass and require compliance with a regulation.
- If pursued, upwind sources would need to be added to the emissions inventory.
- Year of first benefits is unknown at this time.

Summary Analysis

No. Will not provide reductions by May 2008.

Measure -- Expand OTC Portable Fuel Containers Rule

Quick Reference: Upwind PFC
Measure Name: Expand OTC Portable Fuel Containers Rule

Description:
Expand OTC Portable Fuel Containers Rule to Upwind Counties.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	Yes
No Adverse Impacts	Yes
Reductions >0.1 tpd	Yes

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state-level regulation by Virginia, or other upwind states.
- States require well over 12 months to develop, pass and require compliance with a regulation.
- If pursued, upwind sources would need to be added to the emissions inventory.
- Year of first benefits is unknown at this time.

Summary Analysis

No. Will not provide reductions by May 2008.

Measure -- Expand Stage I Vapor Recovery

Quick Reference: Upwind Stage I
Measure Name: Expand Stage I Vapor Recovery

Description:
Expand Requirements for Stage I Vapor Recovery to Upwind Counties.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	Yes
No Adverse Impacts	Yes
Reductions >0.1 tpd	Yes

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state-level regulation by Virginia, or other upwind states.
- States require well over 12 months to develop, pass and require compliance with a regulation.
- If pursued, upwind sources would need to be added to the emissions inventory.
- Virginia law expressly prohibits expansion of Stage I to areas that are in attainment.
- Year of first benefits is unknown at this time.

Summary Analysis

No. Will not provide reductions by May 2008.

Measure -- Expand Stage II Vapor Recovery

Quick Reference: Upwind Stage II
Measure Name: Expand Stage II Vapor Recovery

Description:
Expand requirements for Stage II Vapor Recovery to Upwind Counties.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	Yes
No Adverse Impacts	Yes
Reductions >0.1 tpd	Yes

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state-level regulation by Virginia, or other upwind states.
- States require well over 12 months to develop, pass and require compliance with a regulation.
- If pursued, upwind sources would need to be added to the emissions inventory.
- Virginia law expressly prohibits expansion of Stage II to areas that are in attainment.
- Year of first benefits is unknown at this time.

Summary Analysis

No. Will not provide reductions by May 2008.

Measure -- Upwind Fuels Controls

Quick Reference: Upwind Fuels
Measure Name: Upwind Fuels Controls

Description:
Expand Use of Reformulated Gasoline to Upwind Counties.
Consider OTC Regional Fuels Initiative.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	Yes
No Adverse Impacts	Yes
Reductions >0.1 tpd	Yes

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state-level regulation by Virginia, or other upwind states.
- States require well over 12 months to develop, pass and require compliance with a regulation.
- If pursued, upwind sources would need to be added to the emissions inventory.
- Regulating regional fuel markets may pose difficult and unique challenges.
- Year of first benefits is unknown at this time.

Summary Analysis

No. Will not provide reductions by May 2008.

Measure -- Control Upwind Port Emissions

Quick Reference: Upwind Ports
Measure Name: Control Upwind Port Emissions

Description:
Pursue approaches to reduce land-based port emissions.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	Yes
No Adverse Impacts	Yes
Reductions >0.1 tpd	Yes

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state-level regulation by upwind states.

- If pursued, upwind sources would need to be added to the emissions inventory.

- A significant portion of port emissions are federally preempted from state and local control.

- Year of first benefits is unknown at this time.

Summary Analysis

No. Will not provide reductions by May 2008.

Appendix

Analysis of Potential Non-Road Source Measures * * *DRAFT March 15, 2007* * *

Potential Non-Road Source RACM Measures in the Metropolitan Washington Region

Quick Reference	Measure Name	Definition	RACM	Reason
Construction Initiative 1	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.	No	No creditable emission reduction
Construction Initiative 2	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.	No	No creditable emission reduction
Construction Initiative 3	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.	No	No creditable emission reduction
Construction Initiative 4	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.	No	No creditable emission reduction
Vol Nonroad Retrofits	Non-Road Diesel Engine Retrofit Program: Voluntary	Develop voluntary program encouraging retrofit of non-road diesel equipment in public and/or private fleets.	No	No creditable emission reduction
Mand Nonroad Retrofits	Non-Road Diesel Engine Retrofit Program: Mandatory	Develop mandatory program requiring retrofit of non-road diesel equipment in public and/or private fleets.	No	Will not provide reductions by May 2008
Smoke Test	Control Off-Road Diesel Engines (smoke test)	Implement mandatory smoke testing program for heavy-duty (>50 hp) off-road diesel engines.	No	Will not provide reductions by May 2008
Locomotive Repower	Retrofit/Repower Locomotives	Provide financial incentives to retrofit or repower locomotives operating in the nonattainment area for cleaner burning diesel or alternative fuels.	No	No creditable emission reduction
Locomotive Idling	Locomotive Idling Reduction	Support Installation of Idling Reduction Technologies on Locomotives.	No	No creditable emission reduction
Airport Cap	Airport Emission Cap	Establish Agreement with Airports Authority to Cap or Reduce Emissions.	No	No creditable emission reduction
Upwind Airports	Airport Emissions Cap in Upwind Counties	Voluntary Agreement to Cap Airport Emissions Outside the Nonattainment Area.	No	No creditable emission reduction
Locomotive Eng Stds	Locomotive Engine Standards	Encourage new federal locomotive engine emission standards (EPA 2012)	No	Will not provide reductions by May 2008
Marine Eng Stds	Marine Diesel Engine Standards	Encourage new federal marine engine emission standards (EPA 2012).	No	Will not provide reductions by May 2008
Cetane	High Cetane Fuel	Require High Cetane Diesel Fuel for Off-road Vehicles.	No	Will not provide reductions by May 2008
Offroad Biodiesel	Biodiesel for Off-Road Equipment	Increase use of biodiesel in off-road diesel equipment during ozone season.	No	No creditable emission reduction
Episodic Nonroad	Episodic Nonroad Measures	Implement a variety of episodic measures targeting sources in the non-road sector, including lawn and garden equipment, commercial and industrial equipment, recreational equipment, marine, etc.	No	No creditable emission reduction
Blue Sky Program	Control Off-Road Diesel Engines (Blue Sky)	Encourage the use of engines that are included in EPA's voluntary "Blue Sky Series" engine program.	No	No creditable emission reductions
SI Engines Retrofit	Control Spark Ignition Engines	Retrofit controls and 3-way catalyst for spark ignition engines.	No	No creditable emission reductions
2-Cycle Replacement	"Cash for Clunkers" 2-cycle Engines	Implement a 2-cycle Engine Replacement Program.	No	No creditable emission reductions
Lawn Equip Replacement	"Cash for Clunkers" Lawn & Garden Equipment	Offer cash for consumers to turn in lawnmowers or lawn tractors and purchase electric or push mowers.	No	No creditable emission reductions
Outboard Replacement	"Cash for Clunkers" Outboard Motors	Offer cash for consumers to turn in old outboard motors and purchase new ones.	No	No creditable emission reductions
Rec Equip Replace	"Cash for Clunkers" Recreational Equipment Program	Offer small cash reward for owners to turn in old, high-emission recreational equipment.	No	No creditable emission reductions
Lawn Equip Idling	Idling Restrictions for Lawn & Garden Equipment	Limit idling by commercial lawn & garden equipment.	No	Not enforceable
Xeriscaping	Control Emissions from Lawn and Garden Equipment (xeriscaping)	Adopt measures to reduce lawn area and mower usage. Xeriscaping.	No	No creditable emission reductions
Ag Retrofits	Agricultural Equipment Retrofits	Require agricultural equipment to be retrofitted with emissions controls.	No	Will not provide reductions by May 2008
Ag Restrictions	Agricultural Equipment Use Restrictions	Ban use of agricultural equipment on Air Quality Action Days.	No	Not feasible
Low Emission Ag	Low-emissions Agricultural Equipment	Require sale of low-emissions agricultural equipment in region.	No	Will not provide reductions by May 2008
Ind Equip Replacement	Industrial Equipment Replacement	Subsidize replacement of fossil-fuel fired industrial equipment with electric industrial equipment.	No	No creditable emission reductions
Ind Equip Retrofit	Industrial Equipment Retrofits	Require industrial equipment to be retrofitted with emissions controls.	No	Will not provide reductions by May 2008
Low Emission Ind	Low-emissions Commercial and Industrial Equipment	Require sale of low-emissions commercial and industrial equipment in region.	No	Will not provide reductions by May 2008

Ind Equip Idling	Idling Restrictions for Commercial and Industrial Equipment	Limit idling by commercial and industrial equipment.	No	Not economically feasible
Construction Fleet Rules	Control Construction Emissions	Limitations and Fleet Rules for Construction Equipment.	No	Not economically feasible
Generator Retrofits	Control Light Commercial Equipment	Retrofit portable engines and generators.	No	Not economically feasible
Rec Equip Retrofits	Recreational Equipment Retrofits	Require recreational equipment to be retrofitted with particulate filters and/or oxidation catalysts.	No	Not economically feasible
Marine Idling	Recreational Marine Idling Restrictions	Restrict idling of marine equipment, either through voluntary or mandatory approaches.	No	No creditable emission reductions
Marine Incentives	Control Recreational Marine Emissions	Provide incentives for newer boats and engines.	No	No creditable emission reductions
Rec Equip Fee	Control Recreational Equipment Emissions	Increase registration fee on recreational vehicles (dedicate fee to clean air fund).	No	Not economically feasible
Tug Boats	Control Commercial Marine Sources	Tug/Push Boat Activity Reductions.	No	Potential adverse impacts
Port Fees	Control Upwind Port Emissions	Emission Fee Program for Port-Related Mobile Sources	No	No creditable emission reductions
Graduated Fees	Graduated registration fees for recreational boats	Levee additional registration fee for registration of boats with old, high-emission engines.	No	Will not provide reductions by May 2008
Low Nox Fuel Additives	Low Nox Fuel Additives	Require the use of low-NOx fuel additives in nonroad equipment.	No	No creditable emission reduction
Air Congest Pricing	Airport Congestion Pricing	Charge higher aircraft landing fees during busy times of day to reduce airport delays and congestion.	No	Not economically feasible
Nonroad Gas Tax	Gas Tax Increase	Implement a fuel tax on off-road gasoline.	No	Not economically feasible
Nonroad Diesel Tax	Diesel Tax Increase	Implement a fuel tax on off-road diesel.	No	Not economically feasible

Measure -- Clean Air Maintenance Initiative: Road Maintenance Contracts

Quick Reference:	Construction Initiative 1	Description:
Measure Name:	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.
RACM Determination:	No	
Reason:	No creditable emission reduction	

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	-
Reductions >0.1 tpd	Yes

Issues

- Voluntary measure. May be included as part of the Innovative Measures Bundle.

- Year of first benefits is 2007, 2008, or 2009.

- Potential adverse impacts.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reduction.

Measure -- Clean Air Construction Initiative: Road Construction Projects

Quick Reference: Construction Initiative 2
Measure Name: Clean Air Construction Initiative: Road Construction Projects
RACM Determination: No
Reason: No creditable emission reduction

Description:
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.

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	-
Reductions >0.1 tpd	Yes

Issues

- Voluntary measure. May be included as part of the Innovative Measures Bundle.
- Year of first benefits is 2007, 2008, or 2009.
- Potential adverse impacts.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reduction.

Measure -- Clean Air Construction Initiative: Off-Road Construction Projects

Quick Reference: Construction Initiative 3
Measure Name: Clean Air Construction Initiative: Off-Road Construction Projects
RACM Determination: No
Reason: No creditable emission reduction

Description:
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.

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	-
Reductions >0.1 tpd	Yes

Issues

- Voluntary measure. May be included as part of the Innovative Measures Bundle.
- Year of first benefits is 2007, 2008, or 2009.
- Potential adverse impacts.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reduction.

Measure -- Clean Air Construction Initiative: Preference for Low-emissions Industrial Equipment

Quick Reference: Construction Initiative 4
Measure Name: Clean Air Construction Initiative: Preference for Low-emissions Industrial Equipment
RACM Determination: No
Reason: No creditable emission reduction

Description:
In bids for government contracts, award extra points to bidders using low-emission industrial equipment.

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	-
Reductions >0.1 tpd	Yes

· Voluntary measure. May be included as part of the Innovative Measures Bundle.

· Year of first benefits is 2007, 2008, or 2009.

· Potential adverse impacts.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reduction.

Measure -- Non-Road Diesel Engine Retrofit Program: Voluntary

Quick Reference: Vol Nonroad Retrofits
Measure Name: Non-Road Diesel Engine Retrofit Program: Voluntary
RACM Determination: No
Reason: No creditable emission reduction

Description:
Develop voluntary program encouraging retrofit of non-road diesel equipment in public and/or private fleets.

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	Yes

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Voluntary measure. May be included as part of the Innovative Measures Bundle.
- Year of first benefits is 2007, 2008, or 2009.
- It may not be technologically feasible to retrofit all types of non-road equipment.
- This measure could also be considered as a TERM in the transportation plan, depending on guidance.

Summary Analysis

Not RACM. No creditable emission reduction.

Measure -- Non-Road Diesel Engine Retrofit Program: Mandatory

Quick Reference: Mand Nonroad Retrofits
Measure Name: Non-Road Diesel Engine Retrofit Program: Mandatory
RACM Determination: No
Reason: Will not provide reductions by May 2008

Description:
Develop mandatory program requiring retrofit of non-road diesel equipment in public and/or private fleets.

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	-
Reductions >0.1 tpd	Yes

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state-level regulation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Potential adverse impacts. Any regulation mandating nonroad equipment retrofits would be controversial.
- Year of first benefits is 2009.

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Control Off-Road Diesel Engines (smoke test)

Quick Reference: Smoke Test
Measure Name: Control Off-Road Diesel Engines (smoke test)

Description:
Implement mandatory smoke testing program for heavy-duty (>50 hp) off-road diesel engines.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	No
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state-level regulation by Maryland, Virginia and the District.
 - All three states require well over 12 months to develop, pass and require compliance with a regulation.
 - Potential adverse impacts. High administrative costs.
- Year of first benefits is 2009.

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Retrofit/Repower Locomotives

Quick Reference: Locomotive Repower
Measure Name: Retrofit/Repower Locomotives

Description:
Provide financial incentives to retrofit or repower locomotives operating in the nonattainment area for cleaner burning diesel or alternative fuels.

RACM Determination: No
Reason: No creditable emission reduction

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Issues

- Voluntary measure. May be included as part of the Innovative Measures Bundle.
- Year of first benefits is 2007, 2008, or 2009.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reduction.

Measure -- Locomotive Idling Reduction

Quick Reference: Locomotive Idling
Measure Name: Locomotive Idling Reduction
RACM Determination: No
Reason: No creditable emission reduction

Description:
Support Installation of Idling Reduction Technologies on Locomotives.

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Issues

- Voluntary measure. May be included as part of the Innovative Measures Bundle.
- Year of first benefits is 2007, 2008, or 2009.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reduction.

Measure -- Airport Emission Cap

Quick Reference: Airport Cap
Measure Name: Airport Emission Cap

Description:
Establish Agreement with Airports Authority to Cap or Reduce Emissions.

RACM Determination: No
Reason: No creditable emission reduction

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	Yes

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Voluntary measure. May be included as part of the Innovative Measures Bundle.
- Year of first benefits is 2007, 2008, or 2009.
- Consider electric GSE, GSE retrofits, GSE idling controls, gate electrification.
- This measure would require the airports authority to cap emissions from airport sources not subject to federal preemption.
- This measure could also involve the airports authority entering into agreements with airlines to cap or reduce emissions.

Summary Analysis

Not RACM. No creditable emission reduction.

Measure -- Airport Emissions Cap in Upwind Counties

Quick Reference: Upwind Airports
Measure Name: Airport Emissions Cap in Upwind Counties

Description:
Voluntary Agreement to Cap Airport Emissions Outside the Nonattainment Area.

RACM Determination: No
Reason: No creditable emission reduction

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	Yes

Issues

· Voluntary measure. May be included as part of the Innovative Measures Bundle.

· Year of first benefits is 2007, 2008, or 2009.

Estimated Cost Effectiveness	
Estimated Reductions	

· This measure would require the airports authority to cap emissions from airport sources not subject to federal preemption.

· This measure could also involve the airports authority entering into agreements with airlines to cap or reduce emissions.

Summary Analysis

Not RACM. No creditable emission reduction.

Measure -- Locomotive Engine Standards

Quick Reference: Locomotive Eng Stds
Measure Name: Locomotive Engine Standards

Description:
Encourage new federal locomotive engine emission standards (EPA 2012)

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	-
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	Yes

Issues

· Mandatory Program. This measure would require federal action. States are preempted from regulating this source.

Estimated Cost Effectiveness	
Estimated Reductions	

· Year of first benefits is 2012.

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Marine Diesel Engine Standards

Quick Reference: Marine Eng Stds
Measure Name: Marine Diesel Engine Standards

Description:
Encourage new federal marine engine emission standards (EPA 2012).

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	-
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	Yes

Issues

· Mandatory Program. This measure would require federal action. States are preempted from regulating this source.

Estimated Cost Effectiveness	
Estimated Reductions	

· Year of first benefits is 2012.

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- High Cetane Fuel

Quick Reference: Cetane
Measure Name: High Cetane Fuel

Description:
Require High Cetane Diesel Fuel for Off-road Vehicles.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	No
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Issues

- Mandatory Program. This measure would require state-level regulation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Year of first benefits is 2009.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Biodiesel for Off-Road Equipment

Quick Reference: Offroad Biodiesel
Measure Name: Biodiesel for Off-Road Equipment

Description:
Increase use of biodiesel in off-road diesel equipment during ozone season.

RACM Determination: No
Reason: No creditable emission reduction

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	-
Reductions >0.1 tpd	-

Issues

- Voluntary measure. May be included as part of the Innovative Measures Bundle.
- Year of first benefits is 2007, 2008, or 2009.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reduction.

Measure -- Episodic Nonroad Measures

Quick Reference: Episodic Nonroad
Measure Name: Episodic Nonroad Measures
RACM Determination: No
Reason: No creditable emission reduction

Description:
Implement a variety of episodic measures targeting sources in the non-road sector, including lawn and garden equipment, commercial and industrial equipment, recreational equipment, marine, etc.

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	-
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	No
Reductions >0.1 tpd	Yes

Issues

- This is an episodic measure that would be effective only on Air Quality Ozone Action Days.
- This measure cannot be enforced.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reduction. May be included in voluntary bundle. This measure is unenforceable from a practical standpoint.

Measure -- Control Off-Road Diesel Engines (Blue Sky)

Quick Reference: Blue Sky Program
Measure Name: Control Off-Road Diesel Engines (Blue Sky)

Description:
Encourage the use of engines that are included in EPA's voluntary "Blue Sky Series" engine program.

RACM Determination: No
Reason: No creditable emission reductions

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Issues

- Voluntary measure. May be included as part of the Innovative Measures Bundle.
- Year of first benefits is 2007, 2008, or 2009.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reduction.

Measure -- Control Spark Ignition Engines

Quick Reference: SI Engines Retrofit
Measure Name: Control Spark Ignition Engines

Description:
Retrofit controls and 3-way catalyst for spark ignition engines.

RACM Determination: No
Reason: No creditable emission reductions

RACM Criterion Summary

Implementation by May 2008	-
Enforceable	Yes
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Issues

- Voluntary measure. May be included as part of the Innovative Measures Bundle.
- Year of first benefits is 2007, 2008, or 2009.
- It may not be technologically feasible to retrofit all types of spark ignition equipment.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reduction.

Measure -- "Cash for Clunkers" 2-cycle Engines

Quick Reference: 2-Cycle Replacement
Measure Name: "Cash for Clunkers" 2-cycle Engines

Description:
Implement a 2-cycle Engine Replacement Program.

RACM Determination: No
Reason: No creditable emission reductions

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	No
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Issues

- Voluntary measure. May be included as part of the Innovative Measures Bundle.
- Year of first benefits is 2007, 2008, or 2009.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reduction.

Measure -- "Cash for Clunkers" Lawn & Garden Equipment

Quick Reference: Lawn Equip Replacement
Measure Name: "Cash for Clunkers" Lawn & Garden Equipment

Description:
Offer cash for consumers to turn in lawnmowers or lawn tractors and purchase electric or push mowers.

RACM Determination: No
Reason: No creditable emission reductions

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	No
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Issues

- Voluntary measure. May be included as part of the Innovative Measures Bundle.
- Year of first benefits is 2007, 2008, or 2009.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reduction.

Measure -- "Cash for Clunkers" Outboard Motors

Quick Reference: Outboard Replacement
Measure Name: "Cash for Clunkers" Outboard Motors

Description:
Offer cash for consumers to turn in old outboard motors and purchase new ones.

RACM Determination: No
Reason: No creditable emission reductions

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	No
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Issues

- Voluntary measure. May be included as part of the Innovative Measures Bundle.
- Year of first benefits is 2007, 2008, or 2009.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reduction.

Measure -- "Cash for Clunkers" Recreational Equipment Program

Quick Reference: Rec Equip Replace
Measure Name: "Cash for Clunkers" Recreational Equipment Program
RACM Determination: No
Reason: No creditable emission reductions

Description:
Offer small cash reward for owners to turn in old, high-emission recreational equipment.

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	No
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Issues

- Voluntary measure. May be included as part of the Innovative Measures Bundle.
- Year of first benefits is 2007, 2008, or 2009.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reduction.

Measure -- Idling Restrictions for Lawn & Garden Equipment

Quick Reference: Lawn Equip Idling
Measure Name: Idling Restrictions for Lawn & Garden Equipment
Description: Limit idling by commercial lawn & garden equipment.

RACM Determination: No
Reason: Not enforceable

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	No
No Adverse Impacts	-
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state-level regulation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- The administrative cost of enforcement is prohibitive. Potential adverse impacts.
- Year of first benefits is 2009.

Summary Analysis

Not RACM. No creditable emission reduction.

Measure -- Control Emissions from Lawn and Garden Equipment (xeriscaping)

Quick Reference: Xeriscaping
Measure Name: Control Emissions from Lawn and Garden Equipment (xeriscaping)
RACM Determination: No
Reason: No creditable emission reductions

Description:
Adopt measures to reduce lawn area and mower usage.
Xeriscaping.

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	Yes
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Issues

- Voluntary measure. May be included as part of the Innovative Measures Bundle.
- Year of first benefits is 2007, 2008, or 2009.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reduction.

Measure -- Agricultural Equipment Retrofits

Quick Reference: Ag retrofits
Measure Name: Agricultural Equipment Retrofits

Description:
Require agricultural equipment to be retrofitted with emissions controls.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	-
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state-level regulation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Because there are no regional standards for low-emissions agricultural equipment, rule development would be extensive and time consuming. The compliance period would also have to be extensive to permit manufacturers to develop new products or select retrofits.
- Year of first benefits is not known at this time.

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Agricultural Equipment Use Restrictions

Quick Reference: Ag Restrictions 1
Measure Name: Agricultural Equipment Use Restrictions

Description:
Ban use of agricultural equipment on Air Quality Action Days.

RACM Determination: No
Reason: Not feasible

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	No
No Adverse Impacts	No
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

· Consider a mandatory or voluntary approach. A voluntary approach would be unenforceable. There are no creditable emission reductions.

· No registry of farmers or operators of agricultural equipment exists, such that they could be provided with Ozone Action Day notices in a timely manner. Affected operators may not use email and may be unwilling to check call in numbers daily.

· Enforcement of this measure would be difficult and costly due to the wide geographical area to be patrolled. A daily visit by an inspector would not ensure that equipment was not being operated before or after the visit.

· Because states do not have the personnel to enforce this rule, they would need to rely on local enforcement or hire additional staff.

· Potential adverse impacts, especially in the case of multi-day exceedance episodes

Summary Analysis

Enforcement of this measure would be prohibitively difficult, as there is no registry of affected equipment operators nor is there an effective method for ensuring they comply with the rule. Therefore the measure is not a RACM.

Measure -- Low-emissions Agricultural Equipment

Quick Reference: Low Emission Ag
Measure Name: Low-emissions Agricultural Equipment

Description:
Require sale of low-emissions agricultural equipment in region.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	-
Economically Feasible	No
No Adverse Impacts	No
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state-level regulation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Because there are no regional standards for low-emissions agricultural equipment, rule development would be extensive and time consuming. The compliance period would also have to be extensive to permit manufacturers to develop new products or select retrofits.
- Year of first benefits is not known at this time.

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Industrial Equipment Replacement

Quick Reference: Ind Equip Replacement
Measure Name: Industrial Equipment Replacement

Description:
Subsidize replacement of fossil-fuel fired industrial equipment with electric industrial equipment.

RACM Determination: No
Reason: No creditable emission reductions

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	No
Reductions >0.1 tpd	-

Issues

- Voluntary measure. May be included as part of the Innovative Measures Bundle.
- Year of first benefits is 2007, 2008, or 2009.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Measure -- Industrial Equipment Retrofits

Quick Reference: Ind Equip Retrofit
Measure Name: Industrial Equipment Retrofits

Description:
Require industrial equipment to be retrofitted with emissions controls.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	No
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state-level regulation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Rule development would be extensive and time consuming. The compliance period would also have to permit manufacturers to develop new products or select retrofits.
- Year of first benefits is not known at this time.

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Low-emissions Commercial and Industrial Equipment

Quick Reference: Low Emission Ind
Measure Name: Low-emissions Commercial and Industrial Equipment
RACM Determination: No
Reason: Will not provide reductions by May 2008

Description:
Require sale of low-emissions commercial and industrial equipment in region.

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	-
Reductions >0.1 tpd	Yes

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state-level regulation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Rule development would be extensive and time consuming. The compliance period would also have to permit manufacturers to develop new products or select retrofits.
- Year of first benefits is not known at this time.

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Idling Restrictions for Commercial and Industrial Equipment

Quick Reference: Ind Equip Idling
Measure Name: Idling Restrictions for Commercial and Industrial Equipment
RACM Determination: No
Reason: Not economically feasible

Description:
Limit idling by commercial and industrial equipment.

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	No
No Adverse Impacts	Yes
Reductions >0.1 tpd	Yes

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state-level regulation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- The administrative cost of enforcement is prohibitive. Potential adverse impacts.
- Year of first benefits is 2009.

Summary Analysis

Measure -- Recreational Equipment Retrofits

Quick Reference: Rec Equip Retrofits
Measure Name: Recreational Equipment Retrofits

Description:
Require recreational equipment to be retrofitted with particulate filters and/or oxidation catalysts.

RACM Determination: No
Reason: Not economically feasible

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	-
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state-level regulation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Rule development would be extensive and time consuming. The compliance period would also have to permit time for installing retrofits.
- Year of first benefits is not known at this time.
- Costs to administer program prohibitive.

Summary Analysis

Not RACM. Not economically feasible.

Measure -- Control Light Commercial Equipment

Quick Reference: Generator Retrofits
Measure Name: Control Light Commercial Equipment

Description:
Retrofit portable engines and generators.

RACM Determination: No
Reason: Not economically feasible

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	No
Technologically Feasible	-
Economically Feasible	No
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. This measure would require state-level regulation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Rule development would be extensive and time consuming. The compliance period would also have to permit time for installing retrofits.
- Year of first benefits is not known at this time.
- Costs to administer program prohibitive.

Summary Analysis

Not RACM. Not economically feasible.

Measure -- Control Construction Emissions

Quick Reference: Construction Fleet Rules
Measure Name: Control Construction Emissions

Description:
 Limitations and Fleet Rules for Construction Equipment.

RACM Determination: No
Reason: Not economically feasible

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	-
Economically Feasible	No
No Adverse Impacts	No
Reductions >0.1 tpd	Yes

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- This measure would require either state-level regulation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Any regulation on private construction equipment fleets would be controversial.
- Year of first benefits is 2009.

Summary Analysis

Not RACM. Potential adverse impacts. Not economically feasible.

Measure -- Recreational Marine Idling Restrictions

Quick Reference: Marine Idling
Measure Name: Recreational Marine Idling Restrictions

Description:
Restrict idling of marine equipment, either through voluntary or mandatory approaches.

RACM Determination: No
Reason: No creditable emission reductions

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	No
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

This measure could be adopted as either a voluntary or mandatory measure, either year-round, during the ozone season, or on Air Quality Action Days.

-If a mandatory measure, all three states require well over 12 months to develop, pass and require compliance with a regulation.

- Year of first benefits is 2009.

Summary Analysis

NOT RACM. Mandatory program cannot achieve reductions by May 2008. Administrative cost of program prohibitive.

Measure -- Low Nox Fuel Additives

Quick Reference: Low Nox Fuel Additives
Measure Name: Low Nox Fuel Additives

Description:
Require the use of low-NOx fuel additives in nonroad equipment.

RACM Determination: No
Reason: No creditable emission reduction

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	No
Technologically Feasible	-
Economically Feasible	No
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

· This measure could be adopted as either a voluntary or mandatory measure, for a variety of different equipment types.

· If a mandatory measure, all three states require well over 12 months to develop, pass and require compliance with a regulation.

· Year of first benefits is 2009.

Summary Analysis

NOT RACM. Mandatory program cannot achieve reductions by May 2008. Administrative cost of program prohibitive.

Measure -- Control Recreational Marine Emissions

Quick Reference: Marine Incentives
Measure Name: Control Recreational Marine Emissions

Description:
Provide incentives for newer boats and engines.

RACM Determination: No
Reason: No creditable emission reductions

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	No
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Issues

- Voluntary measure. May be included as part of the Innovative Measures Bundle.
- Year of first benefits is 2007, 2008, or 2009.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reduction.

Measure -- Control Recreational Equipment Emissions

Quick Reference: Rec Equip Fee
Measure Name: Control Recreational Equipment Emissions

Description:
Increase registration fee on recreational vehicles (dedicate fee to clean air fund).

RACM Determination: No
Reason: Not economically feasible

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	No
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- This measure would require either state-level regulation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Year of first benefits is 2009.

Summary Analysis

Not RACM. Not economically feasible. No reductions by May 2008.

Measure -- Control Commercial Marine Sources

Quick Reference: Tug Boats
Measure Name: Control Commercial Marine Sources

Description:
Tug/Push Boat Activity Reductions.

RACM Determination: No
Reason: Potential adverse impacts

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	No
No Adverse Impacts	No
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- This measure would require either state-level regulation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Year of first benefits is 2009.

Summary Analysis

Not RACM. Not economically feasible. Potential adverse impacts. No reductions by May 2008.

Measure -- Control Upwind Port Emissions

Quick Reference: Port Fees
Measure Name: Control Upwind Port Emissions

Description:
Emission Fee Program for Port-Related Mobile Sources

RACM Determination: No
Reason: No creditable emission reductions

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- This measure would require either state-level regulation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- The IAQC is currently evaluating the potential for controls on upwind sources.
- If pursued, upwind sources would need to be added to the emissions inventory.
- Year of first benefits is 2009.

Summary Analysis

Not RACM. No creditable emission reduction.

Measure -- Graduated registration fees for recreational boats

Quick Reference: Graduated Fees
Measure Name: Graduated registration fees for recreational boats

Description:
Levee additional registration fee for registration of boats with old, high-emission engines.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	No
No Adverse Impacts	-
Reductions >0.1 tpd	-

Issues

- This measure would require either state-level regulation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Year of first benefits is 2009.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No reductions by May 2008. Not economically feasible.

Measure -- Airport Congestion Pricing

Quick Reference: Air Congest Pricing
Measure Name: Airport Congestion Pricing

Description:
Charge higher aircraft landing fees during busy times of day to reduce airport delays and congestion.

RACM Determination: No
Reason: Not economically feasible

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	No
No Adverse Impacts	Yes
Reductions >0.1 tpd	Yes

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- This measure could be adopted as either a voluntary or mandatory measure.
- If a mandatory measure, all three states require well over 12 months to develop, pass and require compliance with a regulation.
- Year of first benefits is 2009.

Summary Analysis

Not RACM. Not economically feasible. No reductions by May 2008.

Measure -- Gas Tax Increase

Quick Reference: Nonroad Gas Tax
Measure Name: Gas Tax Increase

Description:
Implement a fuel tax on off-road gasoline.

RACM Determination: No
Reason: Not economically feasible

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	No
No Adverse Impacts	-
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- This measure would require state-level regulation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Year of first benefits is 2009.

Summary Analysis

Not RACM. No reductions by May 2008.

Measure -- Diesel Tax Increase

Quick Reference: Nonroad Diesel Tax
Measure Name: Diesel Tax Increase

Description:
Implement a fuel tax on off-road diesel.

RACM Determination: No
Reason: Not economically feasible

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	No
No Adverse Impacts	-
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- This measure would require state-level regulation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Year of first benefits is 2009.

Summary Analysis

Not RACM. No reductions by May 2008.

Appendix

Analysis of Potential Mobile Source Measures

*** * *DRAFT March 15, 2007* * ***

Potential Mobile Source RACM Measures in the Metropolitan Washington Region

Measure Name	Definition	RACM	Reason
CAL LEV II Standards	Adopt CAL LEV II Standards, which will require increased zero emission vehicles with marginal VOC and CO2 reductions in 2010.	No	Will not provide reductions by May 2008
Expand Remote Sensing Program	Expand the Adoption of a Remote Sensing Program to Maryland and the District of Columbia.	No	Will not provide reductions by May 2008
OTC Corridor Strategy	Implement truck stop electrification projects and Heavy-Duty Engine Engine Control Module (ECM) Recalibration (chip reflash) along the I-95 corridor.	No	No creditable emission reduction
Low-emission Vehicle Purchases	Accelerate adoption of low-emission vehicles. Target a variety of fleet and vehicle types.	No	Not enforceable
Voluntary Diesel Retrofits	Implement voluntary diesel retrofit programs. Target a variety of fleet and vehicle types.	No	No creditable emission reduction
Mandatory Diesel Retrofit Program	Require retrofit of onroad diesel vehicles. Target a variety of fleet and vehicle types.	No	Will not provide reductions by May 2008
Rebate for Purchase of Hybrid Vehicles	Issue rebate for purchase and registration of hybrid vehicles.	No	No creditable emission reduction
Zero I/M waivers and exemptions	Eliminate all waivers and exemptions in the I/M program.	No	Will not provide reductions by May 2008
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	Will not provide reductions by May 2008
Expand I/M Requirements to Upwind Counties	Expand Inspection and Maintenance Requirements.	No	Will not provide reductions by May 2008
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	Will not provide reductions by May 2008
Enhanced Enforcement of Mobile Source Regulations	Increase smoking vehicle enforcement.	No	No creditable emission reduction
Enhanced Enforcement of Vehicle Idling	Step-up enforcement of existing regulations to prevent extended vehicle idling.	No	No creditable emission reduction
Enhanced Enforcement: Speed Limits	Increase speed limit enforcement so that more vehicles are traveling at or below the posted limit.	No	No creditable emission reduction
Vehicle Share Programs	Develop vehicle share programs.	No	No creditable emission reduction
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	Will not provide reductions by May 2008
Control Bus Emissions	Provide electrified parking spaces or APUs for tour buses.	No	No creditable emission reductions
Control Delivery Truck Emissions	Establish voluntary emission reduction program with delivery fleets.	No	No creditable emission reduction

"Cash for Clunkers" On-Road Vehicles	Fund voluntary program paying vehicle owners to turn in old vehicles for scrappage.	No	Not economically feasible
Annual Gasoline Vehicle Pollution Fee	Levy an annual fee on petroleum-powered vehicles based on mileage driven and emission rates (odometer tax).	No	Will not provide reductions by May 2008
Graduated Car Tax	Charge higher car tax under a variety of different scenarios, including multiple cars and petroleum-based vehicles.	No	Will not provide reductions by May 2008
Pay-as-you-drive auto insurance (\$/gal)	Offer auto insurance rates linked to number of gallons of fuel consumed by vehicle.	No	Will not provide reductions by May 2008
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.	No	Will not provide reductions by May 2008
Gasoline Engine Retrofit Program	Retrofit with 3-way catalysts on gasoline-burning heavy duty trucks that currently have 2-way catalysts or no catalysts.	No	No creditable emission reduction
Motorcycle I/M Program	End the motorcycle smog check exemption.	No	Will not provide reductions by May 2008
"Cash for Clunkers" Gas Caps Program	Provide free replacement gas caps to light- and medium-duty vehicle owners.	No	No creditable emission reduction
Electric Vehicle Tax Incentives	Establish incentives to purchase electric vehicles.	No	Not enforceable
Truck Idling Reduction: Truck Stop Electrification (TSE)	Implement projects to electrify truck stops.	No	No creditable emission reduction
Truck Idling Reduction: Auxilliary Power Units (APU)	Increase market penetration of APUs to reduce truck idling.	No	No creditable emission reduction
Improve Truck Fleet Fuel Economy	Encourage adoption of technologies that increase truck fleet fuel economy.	No	No creditable emission reduction
Increase Intermodal Transport	Increase use of intermodal options for transporting goods.	No	No creditable emission reduction
Control Heavy Duty Diesel Engines	Heavy-duty engine Engine Control Module (ECM) recalibration (chip reflash).	No	No creditable emission reduction
Diesel I/M Program	Perform community-based inspections of trucks and buses.	No	No creditable emission reduction
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	Will not provide reductions by May 2008
Biodiesel Fuel	Expand use of biodiesel fuel for on-road vehicles.	No	No creditable emission reduction
CARB Diesel Fuel	Implement CARB diesel fuel standards.	No	Will not provide reductions by May 2008
High Cetane Fuel	Require high-Cetane diesel fuel for on-road vehicles.	No	Will not provide reductions by May 2008
Low-NOx Diesel Fuel	Require regional use of low-NOx fuel additives for on-road diesel vehicles	No	Will not provide reductions by May 2008
Fuel Additives to Reduce Emissions	Use emulsified diesel fuel in diesel-burning heavy duty vehicles.	No	Not enforceable
Gas Tax Increase	Implement a fuel tax on on-road gasoline.	No	Will not provide reductions by May 2008

Diesel Tax Increase	Implement a fuel tax on on-road diesel.	No	Will not provide reductions by May 2008
Expand HOV Network on the Freeway System	Construct additional HOV lanes on regional freeways.	No	Will not provide reductions by May 2008
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	No creditable emission reductions
Replace Traffic Signals with Lesser Controls	Install roundabouts in place of signals at low volume intersections.	No	Will not provide reductions by May 2008
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.	No	No creditable emission reductions
Traffic Signal Optimization	Regularly optimize traffic signals to reduce idling and low-speed emissions.	No	No creditable emission reductions
Build Park & Ride Lots at Major Intersections of Commuter Highways	Construct new park & ride commuter lots along HOV facilities.	No	No creditable emission reductions
Extend Ramp Metering	Install signals to control flow of vehicles at selected freeway ramp entrances to maintain level of service.	No	No creditable emission reductions
Permit Right Turn on Red	Reduce vehicle idling time by permitting right turn on red, where safety allows.	No	No creditable emission reductions
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	Will not provide reductions by May 2008
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	Will not provide reductions by May 2008
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	Will not provide reductions by May 2008
Area Pricing: Entry Fees	Collect fees from drivers to enter a pre-defined area.	No	Will not provide reductions by May 2008
Transportation Funding Initiatives	Require that Congestion Mitigation Air Quality (CMAQ) funds be used only for projects that improve air quality.	No	Will not provide reductions by May 2008
Establish Clean Air Fund	Sell Clean Air License Plates to fund air quality programs (similar to "Save the Bay" tags).	No	Will not provide reductions by May 2008
Electronic Tolling	Expand interoperability of electronic tolling systems.	No	No creditable emission reductions

Control Vehicle Speeds: Automated Enforcement	Automate speed enforcement and lower the speed limit to 55 mph for heavy duty vehicles.	No	Will not provide reductions by May 2008
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.	No	Will not provide reductions by May 2008
Manage Roadway Usage: Dedicated Bus Lanes	Dedicate roadway lanes for use by buses.	No	Potential adverse impacts
Convenience Commercial Centers in Residential Areas	Change zoning ordinances to allow neighborhood-serving retail establishments in residential areas.	No	Will not provide reductions by May 2008
Incentives for Mixed Use at Transit Centers	Include incentives for mixed-use development at transit centers to reduce sprawl and VMT.	No	Will not provide reductions by May 2008
Infill Development	Implement an infill development program throughout the Washington region.	No	Will not provide reductions by May 2008
Proximity Commute: Job Swap	Encourage employees of the same firm to swap jobs, permitting each to work at a location closer to home.	No	No creditable emission reductions
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 creditable emission reductions
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.	No	No creditable emission reductions
Telecommuting Centers and Telework Program	Telecommuting centers, including marketing activity, consultant support, commuter and employer information and assistance.	No	No creditable emission reductions
Telecourses at Local Colleges and Universities	Encourage local colleges and universities to offer telecourses to reduce vehicle trips.	No	No creditable emission reductions
Restrict Construction of New Parking	Restrict construction of new parking at employment centers based on distance from transit and urban core.	No	No creditable emission reduction
ATM Machines Installed at Metro Stations	Install ATMs near metro stations for rider convenience.	No	No creditable emission reductions
Automatic Bus Locator System	System would provide bus location information to transit dispatchers. This would decrease wait time and improve on-time arrival/departure.	No	No creditable emission reductions
Clean Commute/Try Transit Week	Promotes use of alternative transportation, including transit, by daily commuters for one week per year.	No	No creditable emission reductions
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.	No	Will not advance attainment date
Discount Multi-Trip Bus Fares	Introduce discount programs reducing cost of multiple bus rides through purchase of pass books (e.g. 10-trip tickets).	No	Will not advance attainment date
Additional Transit Stores	Establish additional stationary transit stores in the region.	No	No creditable emission reductions

Subsidize Transit Usage	Expand MetroChek to all public sector employees	No	Will not advance attainment date
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	Will not provide reductions by May 2008
Expand VRE Train Service	Expand VRE train service to include additional departures.	No	Will not provide reductions by May 2008
Express Buses From Outlying Areas	Implement direct bus service from outlying Park & Ride lots and far suburbs to major work centers.	No	No creditable emission reductions
Flat Fare For All Transit Trips	Single price all public transit services with free transfers all day, 7 days per week.	No	Will not provide reductions by May 2008
Free Bus Service Off-Peak	Institute free off-peak bus service from 10-2 on weekdays and all day on weekends.	No	Will not provide reductions by May 2008
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	Will not provide reductions by May 2008
Free Rail Use 10-3	Free Metrorail trips for all riders from 10AM-3PM on weekdays.	No	Will not provide reductions by May 2008
Free Transit Passes to Students	Free transit passes for high school and college students, subsidized by schools or through student registration fee.	No	Will not provide reductions by May 2008
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	Will not provide reductions by May 2008
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	Will not provide reductions by May 2008
Metrorail Feeder Bus Service & Fare Buydown	Improve Metrorail feeder bus service at underutilized park & ride lots, implement fare buydown program.	No	No creditable emission reduction
New MARC Coaches	Purchase additional coaches for MARC to accommodate increased ridership.	No	Will not provide reductions by May 2008
New Surface Parking at Transit Centers	Add new parking spaces at transit centers (bus, Metrorail, MARC, VRE) parking lots.	No	No creditable emission reductions
Provide Additional Transit Service to Core	Increase funding for transit services to expand core service.	No	Will not provide reductions by May 2008
Provide Additional Transit Service Access	Increase funding for enhancing access to transit services.	No	No creditable emission reductions
Real-Time Bus Schedule Information	Expand trials of real-time bus schedule information to local transit providers.	No	No creditable emission reductions
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.	No	No creditable emission reductions
Regional Bus Service Expansion	Expansion of Metrobus and other regional bus services.	No	Will not provide reductions by May 2008
Support Rail to Dulles and BWI Airports	Provide funding to expand metro rail services to Dulles and BWI airports.	No	Will not provide reductions by May 2008

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.	No	No creditable emission reductions
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	Will not provide reductions by May 2008
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.	No	No creditable emission reductions
Rush Hour Shift	Shift Metrorail AM and PM rush hours to start 30 min earlier and end 30 min later.	No	No creditable emission reduction
Employer Metro Shuttle Bus Services	Provide incentives for businesses to provide employee shuttle service to the nearest rail or transit stop.	No	No creditable emission reduction
Eliminate or Restrict Airport Parking	Eliminate airport parking and replace with alternative fuel shuttle buses.	No	Will not provide reductions by May 2008
Bicycle Racks in DC	Install bicycle racks at various locations throughout the region.	No	No creditable emission reductions
Bike Lockers at Metro Stations, Park & Ride Lots, Other Locations	Expand existing bike lockers at Metrorail stations, install bicycle storage spaces in parking lots.	No	No creditable emission reduction
Bike Racks on Transit Buses	Provide external bike racks on WMATA and other local transit buses.	No	No creditable emission reduction
Bike/Pedestrian Paths	Fund construction of additional bicycle/pedestrian paths in the region.	No	No creditable emission reduction
Employers Provide Free Bicycles for Midday Use	Require employers to provide one bicycle per 50 employees for mid-day business or personal use.	No	No creditable emission reduction
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.	No	No creditable emission reduction
Safe Routes to School Program	Implement a safe pedestrian and bicycle routes to school program to reduce VMT.	No	No creditable emission reduction
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	No creditable emission reduction
4 Day Work Week/Flexible Work Schedules	Encourage employers to adopt a shorter work week, with employees working 4 10-hour days.	No	No creditable emission reductions
Access to Jobs Program	Identifies gaps in transit service between places of residence and places of work for low wage workers.	No	No creditable emission reduction
Mandatory Employee Commute Reduction	Mandatory employer trip reduction to reduce employee vehicle trips.	No	Potential adverse impacts
Restrict Parking at Schools	Restrict high school students from driving to and parking at high schools when bus service is available.	No	No creditable emission reduction
Student & staff based college & university rideshare programs	Create rideshare program focused on students and staff at regional universities.	No	No creditable emission reduction
Vanpool Programs	Create programs and incentives designed to increase the number of vanpools in the region.	No	No creditable emission reduction
Commuter Parking Tax	Implement daily tax on employers or employees that match certain commuting/parking criteria.	No	Will not provide reductions by May 2008

Market Based Parking Charge at Federal Facilities	Negotiate agreement with federal government to charge market rate for daily parking for all employees.	No	Will not provide reductions by May 2008
Parking Impact Fee: All Parking	Levy annual impact fee on every parking space in nonattainment area.	No	Will not provide reductions by May 2008
Free Parking for Carpools/Vanpools	Provide free reserved parking spaces for all carpools or vanpools.	No	No creditable emission reductions
Employer Parking Cash-Out	Implement program encouraging or requiring employers to provide the value of subsidized parking to employees who use alternative commute strategies.	No	No creditable emission reductions
Remove Trash Trucks From Area Streets	Reduce use of trash trucks through transport of trash by barge.	No	No creditable emission reductions
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).	No	No creditable emission reductions
Clean Air Partners: Public Outreach and Education	Implement Strategic Communication Campaigns to Increase Public Awareness (reduce vehicle use).	No	No creditable emission reductions
Local Government Education Campaign	Implement Strategic Communication Campaigns to Increase Local Government Air Quality Improvement Efforts (reduce vehicle use).	No	No creditable emission reductions
Mass Marketing Campaign	Marketing effort involving business-to-business advertising campaign in print media and on world wide web.	No	No creditable emission reduction
Commuter Choice - State & Local Government Employees	Provide the region's local, state and municipal employees with transit benefits.	No	No creditable emission reductions
Commuter Choice Tax Credit	Employers subsidize employees' monthly transit or vanpool costs and receive a tax credit for incurred expenses.	No	No creditable emission reductions
Commuter Operations Center	Provides commuter assistance services, including carpool and vanpool ridematching.	No	No creditable emission reductions
Guaranteed Ride Home	Provides free rides home in event of unexpected emergency or unscheduled overtime to commuters using public transport.	No	No creditable emission reductions
Integrated Rideshare	Provides transit, park & ride, and telecenter information to all commuters on a matchlist.	No	No creditable emission reductions
Interactive Rideshare Kiosks	Transportation Information Kiosks in Maryland, Virginia and the District of Columbia.	No	No creditable emission reductions

Measure -- CAL LEV II Standards

Quick Reference: CAL LEV
Measure Name: CAL LEV II Standards

Description:
Adopt CAL LEV II Standards, which will require increased zero emission vehicles with marginal VOC and CO2 reductions in 2010.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program: This measure would require state-level legislation or regulation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Any regulation mandating carbon emission reductions would be controversial.
- Year of first benefits is 2010.

Summary Analysis

Reductions from CAL LEV II will not be available by May 2008.

Measure -- Expand Remote Sensing Program

Quick Reference: Remote Sensing
Measure Name: Expand Remote Sensing Program

Description:
Expand the Adoption of a Remote Sensing Program to Maryland and the District of Columbia.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Issues

· Mandatory Program: This measure would require state-level legislation or regulation by Maryland and the District.

· States require well over 12 months to develop, pass and require compliance with a regulation.

Estimated Cost Effectiveness	
Estimated Reductions	

· Year of first benefits is 2009.

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- OTC Corridor Strategy

Quick Reference: Corridors
Measure Name: OTC Corridor Strategy

Description:
Implement truck stop electrification projects and Heavy-Duty Engine Engine Control Module (ECM) Recalibration (chip reflash) along the I-95 corridor.

RACM Determination: No
Reason: No creditable emission reduction

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Issues

- Voluntary Measure. May be included as part of the Innovative Measures Bundle.
- Consider mandatory chip reflash program.
- Year of first benefits is 2009 if mandatory.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reduction.

Measure -- Low-emission Vehicle Purchases

Quick Reference: Low-emission Vehicle Purchases
Measure Name: Low-emission Vehicle Purchases

Description:
Accelerate adoption of low-emission vehicles. Target a variety of fleet and vehicle types.

RACM Determination: No
Reason: Not enforceable

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	Yes
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Issues

- Voluntary Measure. May be included as part of the Innovative Measures Bundle.
- Year of first benefits is 2007.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

May be included in the voluntary bundle.
Not RACM. Not enforceable.

Measure -- Voluntary Diesel Retrofits

Quick Reference: Vol Diesel Retrofit
Measure Name: Voluntary Diesel Retrofits

Description:
Implement voluntary diesel retrofit programs. Target a variety of fleet and vehicle types.

RACM Determination: No
Reason: No creditable emission reduction

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Issues

· Voluntary Measure. May be included as part of the Innovative Measures Bundle.

· Achieving NOx or VOC reductions through retrofits is expensive.

Estimated Cost Effectiveness	
Estimated Reductions	

· Year of first benefits is 2007.

Summary Analysis

May be included in the voluntary bundle.
Not RACM. Not enforceable.

Measure -- Mandatory Diesel Retrofit Program

Quick Reference: Mand Diesel Retrofit |
Measure Name: Mandatory Diesel Retrofit Program

Description:
Require retrofit of onroad diesel vehicles. Target a variety of fleet and vehicle types.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	Yes

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program: This measure would require state-level legislation or regulation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Any regulation mandating onroad diesel vehicle retrofits would be controversial.
- Year of first benefits is 2009.

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Rebate for Purchase of Hybrid Vehicles

Quick Reference: Hybrid Rebates
Measure Name: Rebate for Purchase of Hybrid Vehicles

Description:
Issue rebate for purchase and registration of hybrid vehicles.

RACM Determination: No
Reason: No creditable emission reduction

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Issues

- Voluntary Measure. May be included as part of the Innovative Measures Bundle.
- Consider expanding program to cover clean diesel.
- Year of first benefits is 2007.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reduction.

Measure -- Zero I/M waivers and exemptions

Quick Reference: No Waivers
Measure Name: Zero I/M waivers and exemptions

Description:
Eliminate all waivers and exemptions in the I/M program.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	-
Reductions >0.1 tpd	-

Issues

· Mandatory Program: This measure would require state-level legislation or regulation by Maryland, Virginia and the District.

· All three states require well over 12 months to develop, pass and require compliance with a regulation.

Estimated Cost Effectiveness	
Estimated Reductions	

· Year of first benefits is 2009.

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Fleet ILEV for light-duty gasoline vehicles

Quick Reference: Fleet ILEV
Measure Name: Fleet ILEV for light-duty gasoline vehicles

Description:
Require fleets operating in nonattainment area to be comprised of a percentage of Inherently Low Emission Vehicles (ILEV).

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	No
No Adverse Impacts	No
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program: This measure would require state-level legislation or regulation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Any regulation mandating fleet requirements would be controversial.
- Year of first benefits is 2009.

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Expand I/M Requirements to Upwind Counties

Quick Reference: Upwind IM
Measure Name: Expand I/M Requirements to Upwind Counties
Description: Expand Inspection and Maintenance Requirements.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	Yes

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- This measure would require state-level regulation by Virginia or other upwind states.
- This would require well over 12 months to develop, pass and require compliance with a regulation.
- If pursued, upwind sources would need to be added to the emissions inventory.
- Year of first benefits is 2009.

Summary Analysis

No. Will not provide reductions by May 2008.

Measure -- Control Vehicle Idling

Quick Reference: No Idling
Measure Name: Control Vehicle Idling

Description:
No Idling Rule – Restriction. Limits idling to 5 minutes for all non-commercial, consumer operated vehicles within the Washington NAA. Establish exemptions where required.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	No

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- This measure would require either state-level regulation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Regulations restricting automobile idling would be difficult to enforce.
- Emission reductions may not be creditable.
- Year of first benefits is 2009.

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Enhanced Enforcement of Mobile Source Regulations

Quick Reference: Enforce Smoking Vehicles **Description:**
Measure Name: Enhanced Enforcement of Mobile Source Regulations Increase smoking vehicle enforcement.

RACM Determination: No
Reason: No creditable emission reduction

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	No

Issues

· Voluntary Measure.

· Year of first benefits is 2007.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reduction.

Measure -- Enhanced Enforcement of Vehicle Idling

Quick Reference: Enforce Idling
Measure Name: Enhanced Enforcement of Vehicle Idling

Description:
Step-up enforcement of existing regulations to prevent extended vehicle idling.

RACM Determination: No
Reason: No creditable emission reduction

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	No

- Voluntary Measure.

- Year of first benefits is 2007.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reduction.

Measure -- Enhanced Enforcement: Speed Limits

Quick Reference: Enforce Speed Limits
Measure Name: Enhanced Enforcement: Speed Limits

Description:
Increase speed limit enforcement so that more vehicles are traveling at or below the posted limit.

RACM Determination: No
Reason: No creditable emission reduction

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	No

Issues

- Voluntary Measure.

- Year of first benefits is 2007.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reduction.

Measure -- Vehicle Share Programs

Quick Reference: Vehicle Sharing
Measure Name: Vehicle Share Programs

Description:
Develop vehicle share programs.

RACM Determination: No
Reason: No creditable emission reduction

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	No

· Voluntary Measure.

· Year of first benefits is 2007.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reduction.

Measure -- On-road Heavy-Duty Diesel Smoke Testing and I/M Program

Quick Reference: Onroad Smoke Test
Measure Name: On-road Heavy-Duty Diesel Smoke Testing and I/M Program
RACM Determination: No
Reason: Will not provide reductions by May 2008

Description:
Implement a smoke testing and/or Inspection/Maintenance Program for on-road heavy-duty diesel engines.

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	No

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program: This measure would require state-level legislation or regulation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Heavy duty diesel smoke testing may not reduce NOx or VOC emissions.
- Year of first benefits is 2009.

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Control Bus Emissions

Quick Reference: Tour Bus
Measure Name: Control Bus Emissions

Description:
Provide electrified parking spaces or APUs for tour buses.

RACM Determination: No
Reason: No creditable emission reductions

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

· Voluntary Measure.

· Year of first benefits is 2007.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reduction.

Measure -- Control Delivery Truck Emissions

Quick Reference: Delivery Trucks
Measure Name: Control Delivery Truck Emissions

Description:
Establish voluntary emission reduction program with delivery fleets.

RACM Determination: No
Reason: No creditable emission reduction

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Issues

- Voluntary Measure.
- Large fleet operators in the region participate in EPA's Smartway Program. Companies also have anti-idling policies.
- Year of first benefits is 2007.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reduction.

Measure -- "Cash for Clunkers" On-Road Vehicles

Quick Reference: Vehicle Replace
Measure Name: "Cash for Clunkers" On-Road Vehicles

Description:
Fund voluntary program paying vehicle owners to turn in old vehicles for scrappage.

RACM Determination: No
Reason: Not economically feasible

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	No
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Issues

- Voluntary Measure.

- Year of first benefits is 2006.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Not economically feasible.

Measure -- Annual Gasoline Vehicle Pollution Fee

Quick Reference: Odometer Tax
Measure Name: Annual Gasoline Vehicle Pollution Fee

Description:
Levy an annual fee on petroleum-powered vehicles based on mileage driven and emission rates (odometer tax).

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	-
Reductions >0.1 tpd	-

Issues

· Mandatory Program: This measure would require state-level legislation or regulation by Maryland, Virginia and the District.

· All three states require well over 12 months to develop, pass and require compliance with a regulation.

Estimated Cost Effectiveness	
Estimated Reductions	

· Year of first benefits is 2009.

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Graduated Car Tax

Quick Reference: Car Tax
Measure Name: Graduated Car Tax

Description:
Charge higher car tax under a variety of different scenarios, including multiple cars and petroleum-based vehicles.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	-
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

· Mandatory Program: This measure would require state-level legislation or regulation by Maryland, Virginia and the District.

· All three states require well over 12 months to develop, pass and require compliance with a regulation.

· Year of first benefits is 2009.

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Pay-as-you-drive auto insurance (\$/gal)

Quick Reference: VMT Insurance
Measure Name: Pay-as-you-drive auto insurance (\$/gal)

Description:
Offer auto insurance rates linked to number of gallons of fuel consumed by vehicle.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	-
Reductions >0.1 tpd	-

Issues

· Mandatory Program: This measure would require state-level legislation or regulation by Maryland, Virginia and the District.

· All three states require well over 12 months to develop, pass and require compliance with a regulation.

Estimated Cost Effectiveness	
Estimated Reductions	

· Year of first benefits is 2009.

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Control VOC Content of Automotive Products

Quick Reference: Product VOC
Measure Name: Control VOC Content of Automotive Products
RACM Determination: No
Reason: Will not provide reductions by May 2008

Description:
 Windshield Wiper Fluid – lower VOC. Establish evaporative standards that are lower than those set by the EPA – 35 weight-percent VOC.

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	-
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Issues

- Mandatory Program: This measure would require state-level legislation or regulation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Year of first benefits is 2009.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Gasoline Engine Retrofit Program

Quick Reference: Gas Retrofits
Measure Name: Gasoline Engine Retrofit Program

Description:
Retrofit with 3-way catalysts on gasoline-burning heavy duty trucks that currently have 2-way catalysts or no catalysts.

RACM Determination: No
Reason: No creditable emission reduction

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	No

- Potential voluntary measure.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Motorcycle I/M Program

Quick Reference: Motorcycle IM
Measure Name: Motorcycle I/M Program

Description:
End the motorcycle smog check exemption.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Issues

· Mandatory Program: This measure would require state-level legislation or regulation by Maryland, Virginia and the District.

· All three states require well over 12 months to develop, pass and require compliance with a regulation.

Estimated Cost Effectiveness	
Estimated Reductions	

· Year of first benefits is 2009.

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- "Cash for Clunkers" Gas Caps Program

Quick Reference: Gas Caps
Measure Name: "Cash for Clunkers" Gas Caps Program

Description:
Provide free replacement gas caps to light- and medium-duty vehicle owners.

RACM Determination: No
Reason: No creditable emission reduction

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Issues

- Potential voluntary measure.
- A gas cap program may be implemented under EPA's Mobile Source Air Toxics (MSAT) Rule.
- Year of first benefits is 2007.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Mobile Source Mitigation Fees

Quick Reference: Mobile Miti Fees
Measure Name: Mobile Source Mitigation Fees

Description:
Establish mobile sector mitigation fees

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	-
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

· Mandatory Program: This measure would require state-level legislation or regulation by Maryland, Virginia and the District.

· All three states require well over 12 months to develop, pass and require compliance with a regulation.

· Year of first benefits is 2009.

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Electric Vehicle Tax Incentives

Quick Reference: Electric Vehicle
Measure Name: Electric Vehicle Tax Incentives

Description:
Establish incentives to purchase electric vehicles.

RACM Determination: No
Reason: Not enforceable

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

- Potential voluntary measure.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Not enforceable.

Measure -- Truck Idling Reduction: Truck Stop Electrification (TSE)

Quick Reference: TSE **Description:**
Measure Name: Truck Idling Reduction: Truck Stop Electrification (TSE) Implement projects to electrify truck stops.

RACM Determination: No
Reason: No creditable emission reduction

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

- Potential voluntary measure.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Improve Truck Fleet Fuel Economy

Quick Reference: Truck Efficiency
Measure Name: Improve Truck Fleet Fuel Economy

Description:
Encourage adoption of technologies that increase truck fleet fuel economy.

RACM Determination: No
Reason: No creditable emission reduction

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	-
Economically Feasible	Yes
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

- Potential voluntary measure.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Increase Intermodal Transport

Quick Reference: Intermodal
Measure Name: Increase Intermodal Transport

Description:
Increase use of intermodal options for transporting goods.

RACM Determination: No
Reason: No creditable emission reduction

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	Yes
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

- Potential voluntary measure.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Control Heavy Duty Diesel Engines

Quick Reference: Chip Reflash
Measure Name: Control Heavy Duty Diesel Engines

Description:
Heavy-duty engine Engine Control Module (ECM) recalibration (chip reflash).

RACM Determination: No
Reason: No creditable emission reduction

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory or Voluntary Program. Mandatory measure would require state-level legislation or regulation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Program would only correct issues with compliance with existing programs.
- Year of first benefits is 2009.

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Diesel I/M Program

Quick Reference: Community Inspect
Measure Name: Diesel I/M Program

Description:
Perform community-based inspections of trucks and buses.

RACM Determination: No
Reason: No creditable emission reduction

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	No
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Issues

- Potential voluntary measure.
- Year of first benefits is 2007.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Establish Restricted Zones in Downtown Areas and Transit Centers

Quick Reference: Restricted Zones
Measure Name: Establish Restricted Zones in Downtown Areas and Transit Centers
RACM Determination: No
Reason: Will not provide reductions by May 2008

Description:
Restrict private vehicle use in certain areas during business hours, encouraging pedestrian, bicycle, and transit use.

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	No
Reductions >0.1 tpd	Yes

Issues

- Mandatory Program. Would require complex negotiation between various stakeholders and authorities having jurisdiction.
- Year of first benefits is 2009.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Biodiesel Fuel

Quick Reference: Onroad biodiesel
Measure Name: Biodiesel Fuel

Description:
Expand use of biodiesel fuel for on-road vehicles.

RACM Determination: No
Reason: No creditable emission reduction

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

- Potential voluntary measure.
- Potential NOx disbenefit.
- Year of first benefits is 2007.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- CARB Diesel Fuel

Quick Reference: CARB Diesel
Measure Name: CARB Diesel Fuel

Description:
Implement CARB diesel fuel standards.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	No
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program: This measure would require state-level legislation or regulation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Limited benefit once ULSD is available.
- Year of first benefits is 2009.

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- High Cetane Fuel

Quick Reference: Onroad cetane
Measure Name: High Cetane Fuel

Description:
Require high-Cetane diesel fuel for on-road vehicles.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	No
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Issues

· Mandatory Program: This measure would require state-level legislation or regulation by Maryland, Virginia and the District.

· All three states require well over 12 months to develop, pass and require compliance with a regulation.

Estimated Cost Effectiveness	
Estimated Reductions	

· Year of first benefits is 2009.

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Low-NOx Diesel Fuel

Quick Reference: Low Nox Onroad Fuel
Measure Name: Low-NOx Diesel Fuel

Description:
Require regional use of low-NOx fuel additives for on-road diesel vehicles

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	No
Technologically Feasible	-
Economically Feasible	No
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program: This measure would require state-level legislation or regulation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Mandating fuel additives may be challenging to implement.
- Year of first benefits is 2009.

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Fuel Additives to Reduce Emissions

Quick Reference: Emulsified Diesel
Measure Name: Fuel Additives to Reduce Emissions

Description:
Use emulsified diesel fuel in diesel-burning heavy duty vehicles.

RACM Determination: No
Reason: Not enforceable

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	-
Economically Feasible	No
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Not enforceable.

Measure -- Gas Tax Increase

Quick Reference: Onroad Gas Tax
Measure Name: Gas Tax Increase

Description:
Implement a fuel tax on on-road gasoline.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	No
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

· Mandatory Program: This measure would require state-level legislation or regulation by Maryland, Virginia and the District.

· All three states require well over 12 months to develop, pass and require compliance with a regulation.

· Year of first benefits is 2009.

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Diesel Tax Increase

Quick Reference: Onroad Diesel Tax
Measure Name: Diesel Tax Increase

Description:
Implement a fuel tax on on-road diesel.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	No
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

· Mandatory Program: This measure would require state-level legislation or regulation by Maryland, Virginia and the District.

· All three states require well over 12 months to develop, pass and require compliance with a regulation.

· Year of first benefits is 2009.

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Expand HOV Network on the Freeway System

Quick Reference: Expand HOV
Measure Name: Expand HOV Network on the Freeway System
Description: Construct additional HOV lanes on regional freeways.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	-
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Issues

- Adding significant new HOV lane capacity to the region's transportation network may not be possible by May 2008.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Manage Roadway Usage: Traffic Incident Management

Quick Reference: Traffic Management
Measure Name: Manage Roadway Usage: Traffic Incident Management
RACM Determination: No
Reason: No creditable emission reductions

Description:
Regional Travel Information System/Driver Assistance. Enhance real time traffic information to allow drivers to make better decisions about when and where to travel.

RACM Criterion Summary

Implementation by May 2008	-
Enforceable	No
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Issues

- This program is already in place as a TERM. No creditable emission reduction.
- Adding significant new travel information systems to the region may not be possible by May 2008.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Replace Traffic Signals with Lesser Controls

Quick Reference: Rotary
Measure Name: Replace Traffic Signals with Lesser Controls

Description:
Install roundabouts in place of signals at low volume intersections.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Issues

· Adding significant new rotary capacity to the region's transportation network may not be possible by May 2008.

· Not all intersections are candidates for lesser controls. May not be able to remove controls for safety and liability.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Signals to Flashing Yellow 12am-5am

Quick Reference: Flashing Signals
Measure Name: Signals to Flashing Yellow 12am-5am

Description:
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.

RACM Determination: No
Reason: No creditable emission reductions

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Issues

- Potential voluntary measure.
- Setting signals to flashing yellow is already in place at many intersections in the region.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Traffic Signal Optimization

Quick Reference: Signal Optimization
Measure Name: Traffic Signal Optimization

Description:
Regularly optimize traffic signals to reduce idling and low-speed emissions.

RACM Determination: No
Reason: No creditable emission reductions

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Issues

- Potential voluntary measure.
- Program currently underway in the region.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Build Park & Ride Lots at Major Intersections of Commuter Highways

Quick Reference: Park and Ride
Measure Name: Build Park & Ride Lots at Major Intersections of Commuter Highways
RACM Determination: No
Reason: No creditable emission reductions

Description:
Construct new park & ride commuter lots along HOV facilities.

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Issues

- Additional park and ride lots are currently being constructed.
- Emission reductions from this measure may be *de minimis*.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Extend Ramp Metering

Quick Reference: Ramp Meter
Measure Name: Extend Ramp Metering

Description:
Install signals to control flow of vehicles at selected freeway ramp entrances to maintain level of service.

RACM Determination: No
Reason: No creditable emission reductions

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	-
Reductions >0.1 tpd	No

Issues

- Adding significant ramp metering capabilities to the region's transportation network may not be possible by May 2008.
- May cause traffic congestion on local streets. Limited air quality benefit.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Permit Right Turn on Red

Quick Reference: Right on Red
Measure Name: Permit Right Turn on Red

Description:
Reduce vehicle idling time by permitting right turn on red, where safety allows.

RACM Determination: No
Reason: No creditable emission reductions

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	No

Issues

- Measure is already underway in the region.
- Potential emission reductions may be *de minimis*.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Manage Roadway Usage: No Drive Days

Quick Reference: No Drive Days
Measure Name: Manage Roadway Usage: No Drive Days

Description:
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.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	No
Reductions >0.1 tpd	Yes

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program: This measure would require state-level legislation or regulation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Potential adverse impacts.
- Year of first benefits is 2009.

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Congestion Pricing on Low Occupancy Vehicles

Quick Reference: Congest Pricing
Measure Name: Congestion Pricing on Low Occupancy Vehicles
RACM Determination: No
Reason: Will not provide reductions by May 2008

Description:
Impose a fee on vehicles containing two or fewer persons that use designated roadways, tunnels, and bridges during the peak AM periods.

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	-
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program: This measure would require state-level legislation or regulation by Maryland, Virginia and the District. Federal approval may also be required.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Potential adverse impacts if converting existing lanes to toll.
- Year of first benefits is unknown.

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Green Curb Initiative

Quick Reference: Value Pricing
Measure Name: Green Curb Initiative

Description:
Restricted Access/ "Green Curb". Differential fees and access permits applied during periods of high congestion. Target delivery/loading zones and carpool/vanpool pickup areas.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	-
Reductions >0.1 tpd	No

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program: This measure would require state-level legislation or regulation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Potential adverse impacts.
- Year of first benefits is 2009.

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Area Pricing: Entry Fees

Quick Reference: Entry Fees
Measure Name: Area Pricing: Entry Fees

Description:
Collect fees from drivers to enter a pre-defined area.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	-
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program: This measure would require state-level legislation or regulation by Maryland, Virginia and the District. Congressional approval is needed for projects in the District.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Potential adverse impacts.
- Year of first benefits is 2009.

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Transportation Funding Initiatives

Quick Reference: CMAQ
Measure Name: Transportation Funding Initiatives

Description:
Require that Congestion Mitigation Air Quality (CMAQ) funds be used only for projects that improve air quality.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	No
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program: This measure would require state-level regulation or policy by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Program may already be required under recent federal guidance.
- Year of first benefits depends on project.

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Establish Clean Air Fund

Quick Reference: Clean Air Fund
Measure Name: Establish Clean Air Fund

Description:
Sell Clean Air License Plates to fund air quality programs (similar to "Save the Bay" tags).

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	Yes
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Issues

- Potential voluntary measure. Organizations can petition DMV for new plates.
- May require state legislation.
- Year of first benefits is not known.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Electronic Tolling

Quick Reference: Electronic Tolling
Measure Name: Electronic Tolling

Description:
Expand interoperability of electronic tolling systems.

RACM Determination: No
Reason: No creditable emission reductions

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

- This measure is already in-place.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Control Vehicle Speeds: Automated Enforcement

Quick Reference: Auto Enforce
Measure Name: Control Vehicle Speeds: Automated Enforcement
RACM Determination: No
Reason: Will not provide reductions by May 2008

Description:
Automate speed enforcement and lower the speed limit to 55 mph for heavy duty vehicles.

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Issues

- Measure will require legislation.
- Year of first benefits is not known.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Control Vehicle Speeds: Lower Limits

Quick Reference: Lower Limits
Measure Name: Control Vehicle Speeds: Lower Limits

Description:
Speed Limit Restriction: Regional speed limit of 55 mph on all roads which previously had posted speeds of greater than 55 mph.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	Yes

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- This measure would require state-level legislation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with new legislation.
- Measures may involve increased costs for enforcement.
- Year of first benefits is not known.

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Manage Roadway Usage: Dedicated Bus Lanes

Quick Reference: Dedicated Bus Lanes
Measure Name: Manage Roadway Usage: Dedicated Bus Lanes
Description: Dedicate roadway lanes for use by buses.

RACM Determination: No
Reason: Potential adverse impacts

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	No
Reductions >0.1 tpd	-

Issues

- Year of first benefits is not known.
- Potential adverse impacts if existing lanes are converted.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Potential adverse impacts.

Measure -- Convenience Commercial Centers in Residential Areas

Quick Reference: Commercial Convenience
Measure Name: Convenience Commercial Centers in Residential Areas
RACM Determination: No
Reason: Will not provide reductions by May 2008

Description:
Change zoning ordinances to allow neighborhood-serving retail establishments in residential areas.

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	No
Reductions >0.1 tpd	-

Issues

- Adding significant new commercial convenience centers to the region's land use plans may not be possible by May 2008.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Incentives for Mixed Use at Transit Centers

Quick Reference: Mixed Use
Measure Name: Incentives for Mixed Use at Transit Centers

Description:
Include incentives for mixed-use development at transit centers to reduce sprawl and VMT.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	Yes

Issues

- Measure is already in place at a number of locations in the region. Adding significant new incentives to the region's land use plans may not be possible by May 2008.
- Reductions could be greater than 0.1 tpd if benefits from different projects are combined.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Infill Development

Quick Reference: Infill Development
Measure Name: Infill Development

Description:
Implement an infill development program throughout the Washington region.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Issues

- Measure is already in place at a number of locations in the region. Adding significant new infill developments to the region's land use plans may not be possible by May 2008.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Proximity Commute: Job Swap

Quick Reference: Proximity Commute
Measure Name: Proximity Commute: Job Swap

Description:
Encourage employees of the same firm to swap jobs, permitting each to work at a location closer to home.

RACM Determination: No
Reason: No creditable emission reductions

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

- Potential voluntary measure.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Shorter Distance from Buildings to Bus Stops

Quick Reference: Bus Stop Access
Measure Name: Shorter Distance from Buildings to Bus Stops

Description:
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.

RACM Determination: No
Reason: No creditable emission reductions

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	No
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Issues

- Potential voluntary measure.
- Measure would require changes in land use and zoning.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Smart Growth and Infill Development Programs

Quick Reference: Smart Growth
Measure Name: Smart Growth and Infill Development Programs
RACM Determination: No
Reason: No creditable emission reductions

Description:
Encourage development/redevelopment of land in designated growth areas, encouraging local governments to place greater emphasis on land development near transit stations.

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	No

Issues

- Measure is already in place at a number of locations in the region. Adding significant new smart growth developments to the region's land use plans may not be possible by May 2008.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Measure -- Telecommuting Centers and Telework Program

Quick Reference: Telecommute
Measure Name: Telecommuting Centers and Telework Program

Description:
Telecommuting centers, including marketing activity, consultant support, commuter and employer information and assistance.

RACM Determination: No
Reason: No creditable emission reductions

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

- Measures is already in place in the region.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Telecourses at Local Colleges and Universities

Quick Reference: Telecourse
Measure Name: Telecourses at Local Colleges and Universities

Description:
Encourage local colleges and universities to offer telecourses to reduce vehicle trips.

RACM Determination: No
Reason: No creditable emission reductions

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

- Potential voluntary measure. Measures already being done in some instances.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Restrict Construction of New Parking

Quick Reference: Restrict New Parking
Measure Name: Restrict Construction of New Parking

Description:
Restrict construction of new parking at employment centers based on distance from transit and urban core.

RACM Determination: No
Reason: No creditable emission reduction

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	Yes
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	No
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Mandatory Program. Process will vary by jurisdiction.
- Measure already in place in some jurisdictions.
- Potential adverse impacts.
- Year of first benefits is not known. Timing will vary by jurisdiction.

Summary Analysis

Not RACM. Potential adverse impacts.

Measure -- ATM Machines Installed at Metro Stations

Quick Reference: Metro ATM
Measure Name: ATM Machines Installed at Metro Stations
Description: Install ATMs near metro stations for rider convenience.

RACM Determination: No
Reason: No creditable emission reductions

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

- Measure is already in place.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Automatic Bus Locator System

Quick Reference: Bus Locator
Measure Name: Automatic Bus Locator System
RACM Determination: No
Reason: No creditable emission reductions

Description:
System would provide bus location information to transit dispatchers. This would decrease wait time and improve on-time arrival/departure.

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Issues

- Potential voluntary measure.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Clean Commute/Try Transit Week

Quick Reference: Clean Commute
Measure Name: Clean Commute/Try Transit Week

Description:
Promotes use of alternative transportation, including transit, by daily commuters for one week per year.

RACM Determination: No
Reason: No creditable emission reductions

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

- Potential voluntary measure.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Additional Transit Stores

Quick Reference: Transit Stores
Measure Name: Additional Transit Stores

Description:
Establish additional stationary transit stores in the region.

RACM Determination: No
Reason: No creditable emission reductions

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	No

· Measure is already in place.

· Potential for expansion as a voluntary measure.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Expand Peak Period Metrorail Service

Quick Reference: Expand Peak Transit
Measure Name: Expand Peak Period Metrorail Service

Description:
Extend peak-period service on Metrorail so trains run more frequently between 6-11 am and 3-8 pm.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	No
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Issues

- Potential voluntary measure.
- Significant new capital expenditures would be required.
- Year of first benefit is not known.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Expand VRE Train Service

Quick Reference: Expand VRE
Measure Name: Expand VRE Train Service

Description:
Expand VRE train service to include additional departures.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Issues

Implementation by May 2008	No
Enforceable	No
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

- Potential voluntary measure.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Express Buses From Outlying Areas

Quick Reference: Express Bus
Measure Name: Express Buses From Outlying Areas

Description:
Implement direct bus service from outlying Park & Ride lots and far suburbs to major work centers.

RACM Determination: No
Reason: No creditable emission reductions

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

- Measure is already in place. Additional bus service can be added as demand arises.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reduction.

Measure -- Subsidize Transit Usage

Quick Reference: Subsidize Transit
Measure Name: Subsidize Transit Usage

Description:
Expand MetroChek to all public sector employees

RACM Determination: No
Reason: Will not advance attainment date

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Issues

- Measure already in-place. Not economically viable in all locations, especially outer suburbs which lack sufficient transit infrastructure.
- Potential voluntary measure.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Will not advance attainment date.

Measure -- Discount Multi-Trip Bus Fares

Quick Reference: Discounted Fares
Measure Name: Discount Multi-Trip Bus Fares

Description:
Introduce discount programs reducing cost of multiple bus rides through purchase of pass books (e.g. 10-trip tickets).

RACM Determination: No
Reason: Will not advance attainment date

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

- Measure is already in place.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- College 33 Pass System

Quick Reference: College Pass
Measure Name: College 33 Pass System

Description:
Expand Baltimore college bus fare program to DC area. Program allows students to receive reduced fares near 19 participating schools in the region.

RACM Determination: No
Reason: Will not advance attainment date

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

- Potential voluntary measure.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Flat Fare For All Transit Trips

Quick Reference: Flat Fares
Measure Name: Flat Fare For All Transit Trips

Description:
Single price all public transit services with free transfers all day, 7 days per week.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	-
Enforceable	No
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Potential voluntary measure.
- Year of first benefits is not known.
- May not be possible to implement by May 2008 due to complexity and cost obstacles.
- Need large scale effort to generate emission reductions that exceed the *de minimis* threshold.

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Free Bus Service Off-Peak

Quick Reference: Free Offpeak Bus
Measure Name: Free Bus Service Off-Peak

Description:
Institute free off-peak bus service from 10-2 on weekdays and all day on weekends.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Issues

Implementation by May 2008	-
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

- Potential voluntary measure.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Free Rail Use 10-3

Quick Reference: Free Offpeak Rail
Measure Name: Free Rail Use 10-3

Description:
Free Metrorail trips for all riders from 10AM-3PM on weekdays.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Issues

Implementation by May 2008	-
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

- Potential voluntary measure.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Free bus-to-rail / rail-to-bus transfers

Quick Reference: Free Transit Transfer
Measure Name: Free bus-to-rail / rail-to-bus transfers

Description:
Institute free bus-to-rail transfer similar to free rail-to-bus transfer currently in place.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Issues

Implementation by May 2008	-
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

- Potential voluntary measure.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Free Transit Passes to Students

Quick Reference: Free Student Pass
Measure Name: Free Transit Passes to Students

Description:
Free transit passes for high school and college students, subsidized by schools or through student registration fee.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Issues

Implementation by May 2008	-
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

- Potential voluntary measure.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Half Price Fares on Feeder Bus Service

Quick Reference: Half Price Feeder Bus
Measure Name: Half Price Fares on Feeder Bus Service

Description:
All metro bus and local bus services to Metrorail and commuter rail stations reduce fares by half.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Issues

Implementation by May 2008	-
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

- Potential voluntary measure.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Increase Commuter Rail Frequency

Quick Reference: Rail Frequency
Measure Name: Increase Commuter Rail Frequency

Description:
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.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Issues

Implementation by May 2008	No
Enforceable	No
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

- Must address issues of track usage by freight and commuter lines.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Metrorail Feeder Bus Service & Fare Buydown

Quick Reference: Fare Buydown
Measure Name: Metrorail Feeder Bus Service & Fare Buydown

Description:
Improve Metrorail feeder bus service at underutilized park & ride lots, implement fare buydown program.

RACM Determination: No
Reason: No creditable emission reduction

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	No

- Existing programs in the region have not served to increase transit ridership.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- New MARC Coaches

Quick Reference: MARC Coaches
Measure Name: New MARC Coaches

Description:
Purchase additional coaches for MARC to accommodate increased ridership.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Issues

Implementation by May 2008	No
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

- Year of first benefit is not known.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- New Surface Parking at Transit Centers

Quick Reference: Transit Parking
Measure Name: New Surface Parking at Transit Centers

Description:
Add new parking spaces at transit centers (bus, Metrorail, MARC, VRE) parking lots.

RACM Determination: No
Reason: No creditable emission reductions

RACM Criterion Summary

Issues

Implementation by May 2008	No
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	No

· Measure is already being done where feasible. Acquisition of new land for parking is major hurdle. Adding significant new transit parking capacity to the region's transit system may not be possible by May 2008.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Measure -- Provide Additional Transit Service to Core

Quick Reference: Expand Core Service
Measure Name: Provide Additional Transit Service to Core

Description:
Increase funding for transit services to expand core service.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Issues

Implementation by May 2008	No
Enforceable	No
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

· Significant new capital expenditures would be required.

· Year of first benefit is not known.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Provide Additional Transit Service Access

Quick Reference: Transit Access
Measure Name: Provide Additional Transit Service Access

Description:
Increase funding for enhancing access to transit services.

RACM Determination: No
Reason: No creditable emission reductions

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	No

Issues

· Measure already being implemented where feasible.

· Emission reductions from measure are not expected to be above the *de minimis* threshold.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Real-Time Bus Schedule Information

Quick Reference: Real time Schedule
Measure Name: Real-Time Bus Schedule Information

Description:
Expand trials of real-time bus schedule information to local transit providers.

RACM Determination: No
Reason: No creditable emission reductions

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	No

Issues

- Emission reductions from measure are not expected to be above the de minimis threshold.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Reduce Parking Fees at Facilities Outside the Beltway Adjacent to Metro

Quick Reference: Reduced Parking Fees
Measure Name: Reduce Parking Fees at Facilities Outside the Beltway Adjacent to Metro
RACM Determination: No
Reason: No creditable emission reductions

Description:
Reduce parking fees at Metro parking facilities or county/city managed facilities outside of the Beltway that are located near Metro stations.

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	No
No Adverse Impacts	Yes
Reductions >0.1 tpd	No

Issues

- There may not be underutilized transit parking facilities in the region.
- Emission reductions from measure are not expected to be above the de minimis threshold.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Regional Bus Service Expansion

Quick Reference: Bus Expansion
Measure Name: Regional Bus Service Expansion

Description:
Expansion of Metrobus and other regional bus services.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Issues

- Measure already being implemented in the region. Rapid expansion of the measure is challenging due to cost constraints.
- Year of first benefit is not known.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Support Rail to Dulles and BWI Airports

Quick Reference: Rail to Dulles
Measure Name: Support Rail to Dulles and BWI Airports

Description:
Provide funding to expand metro rail services to Dulles and BWI airports.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Issues

Implementation by May 2008	No
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

- Year of first benefit is not known.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Transit Prioritization -- Queue Jumps

Quick Reference: Queue Jumps
Measure Name: Transit Prioritization -- Queue Jumps
RACM Determination: No
Reason: No creditable emission reductions

Description:
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.

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	No

Issues

- Emission reductions from measure are not expected to be above the *de minimis* threshold.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Universal Transportation Access

Quick Reference: Universal Access
Measure Name: Universal Transportation Access
RACM Determination: No
Reason: Will not provide reductions by May 2008

Description:
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.

RACM Criterion Summary

Implementation by May 2008	-
Enforceable	No
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Issues

- Potential voluntary measure. Measure already being implemented in certain instances.
- Need large scale effort to generate emission reductions that exceed the *de minimis* threshold.
- May not be possible to implement full program by May 2008 due to complexity and cost obstacles.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- WMATA Bus Information Displays with Maps

Quick Reference: WMATA Maps
Measure Name: WMATA Bus Information Displays with Maps
RACM Determination: No
Reason: No creditable emission reductions

Description:
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.

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	No

- Measure is already being implemented in the DC region.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Rush Hour Shift

Quick Reference: Rush Hour Shift
Measure Name: Rush Hour Shift

Description:
Shift Metrorail AM and PM rush hours to start 30 min earlier and end 30 min later.

RACM Determination: No
Reason: No creditable emission reduction

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

- Potential voluntary measure.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Employer Metro Shuttle Bus Services

Quick Reference: Employer Shuttles
Measure Name: Employer Metro Shuttle Bus Services

Description:
Provide incentives for businesses to provide employee shuttle service to the nearest rail or transit stop.

RACM Determination: No
Reason: No creditable emission reduction

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

- Measure is already being implemented in the region.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Eliminate or Restrict Airport Parking

Quick Reference: Restrict Airport Parking
Measure Name: Eliminate or Restrict Airport Parking

Description:
Eliminate airport parking and replace with alternative fuel shuttle buses.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Issues

Implementation by May 2008	No
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	No
Reductions >0.1 tpd	-

- Year of first benefits is not known.

- Potential adverse impacts.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Will not provide reductions by May 2008. Potential adverse impacts.

Measure -- Bike Racks on Transit Buses

Quick Reference: Bus Bike
Measure Name: Bike Racks on Transit Buses
RACM Determination: No
Reason: No creditable emission reduction

Description:
Provide external bike racks on WMATA and other local transit buses.

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	No

Issues

- Measure is already being implemented in the region.
- Emission reductions from measure are not expected to be above the *de minimis* threshold.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Bike Lockers at Metro Stations, Park & Ride Lots, Other Locations

Quick Reference: Bike Lockers **Description:**
Measure Name: Bike Lockers at Metro Stations, Park & Ride Lots, Other Locations **Description:** Expand existing bike lockers at Metrorail stations, install bicycle storage spaces in parking lots.
RACM Determination: No
Reason: No creditable emission reduction

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	No

Issues

- Measure is already being implemented in the region.
- Emission reductions from measure are not expected to be above the *de minimis* threshold.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Bicycle Racks in DC

Quick Reference: Bike Racks
Measure Name: Bicycle Racks in DC

Description:
Install bicycle racks at various locations throughout the region.

RACM Determination: No
Reason: No creditable emission reductions

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	No

Issues

- Measure is already being implemented in the region.
- Emission reductions from measure are not expected to be above the *de minimis* threshold.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Bike/Pedestrian Paths

Quick Reference: Bike Ped Paths
Measure Name: Bike/Pedestrian Paths

Description:
Fund construction of additional bicycle/pedestrian paths in the region.

RACM Determination: No
Reason: No creditable emission reduction

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	No

Issues

- Measure is already being implemented in the region.
- Emission reductions from measure are not expected to be above the *de minimis* threshold.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Employers Provide Free Bicycles for MIDDAY Use

Quick Reference: Free Bike
Measure Name: Employers Provide Free Bicycles for MIDDAY Use

Description:
Require employers to provide one bicycle per 50 employees for mid-day business or personal use.

RACM Determination: No
Reason: No creditable emission reduction

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	No

Issues

- Measure is already being implemented in the region.
- Emission reductions from measure are not expected to be above the *de minimis* threshold.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Bike to Work Day

Quick Reference: Bike to Work
Measure Name: Bike to Work Day

Description:
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.

RACM Determination: No
Reason: No creditable emission reduction

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	No

Issues

- Measure is already being implemented in the region.
- Emission reductions from measure are not expected to be above the *de minimis* threshold.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Safe Routes to School Program

Quick Reference: Safe Routes
Measure Name: Safe Routes to School Program

Description:
Implement a safe pedestrian and bicycle routes to school program to reduce VMT.

RACM Determination: No
Reason: No creditable emission reduction

RACM Criterion Summary

Issues

Implementation by May 2008	-
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	No

- Potential voluntary measure.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Improvements to Bicycle and Pedestrian Access

Quick Reference: Improve Access
Measure Name: Improvements to Bicycle and Pedestrian Access
RACM Determination: No
Reason: No creditable emission reduction

Description:
Provide incentives to developments that speed improvements to bicycle/pedestrian access. This includes improvements to sidewalks, curb ramps, crosswalks, lighting, etc.

RACM Criterion Summary

Issues

Implementation by May 2008	-
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	No

- Potential voluntary measure.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- 4 Day Work Week/Flexible Work Schedules

Quick Reference: Flex Work
Measure Name: 4 Day Work Week/Flexible Work Schedules

Description:
Encourage employers to adopt a shorter work week, with employees working 4 10-hour days.

RACM Determination: No
Reason: No creditable emission reductions

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

- Potential voluntary measure. Measure already being implemented in the region.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Access to Jobs Program

Quick Reference: Access to Jobs
Measure Name: Access to Jobs Program

Description:
Identifies gaps in transit service between places of residence and places of work for low wage workers.

RACM Determination: No
Reason: No creditable emission reduction

RACM Criterion Summary

Issues

Implementation by May 2008	-
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	No

- Potential voluntary measure.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Mandatory Employee Commute Reduction

Quick Reference: Mand Commute Reduction
Measure Name: Mandatory Employee Commute Reduction

Description:
Mandatory employer trip reduction to reduce employee vehicle trips.

RACM Determination: No
Reason: Potential adverse impacts

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	No
No Adverse Impacts	No
Reductions >0.1 tpd	-

Issues

· Mandatory Program.

· Potential adverse impacts.

· Year of first benefits is 2009.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Potential adverse impacts. Will not provide reductions by May 2008.

Measure -- Restrict Parking at Schools

Quick Reference: Restrict School Parking
Measure Name: Restrict Parking at Schools

Description:
Restrict high school students from driving to and parking at high schools when bus service is available.

RACM Determination: No
Reason: No creditable emission reduction

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	No
No Adverse Impacts	No
Reductions >0.1 tpd	No

- Potential voluntary measure.

- Potential adverse impacts.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reduction. Not enforceable. Potential adverse impacts.

Measure -- Student & staff based college & university rideshare programs

Quick Reference: College Rideshare
Measure Name: Student & staff based college & university rideshare programs
RACM Determination: No
Reason: No creditable emission reduction

Description:
Create rideshare program focused on students and staff at regional universities.

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	No

Issues

- Potential voluntary measure.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Vanpool Programs

Quick Reference: Vanpool Programs
Measure Name: Vanpool Programs

Description:
Create programs and incentives designed to increase the number of vanpools in the region.

RACM Determination: No
Reason: No creditable emission reduction

RACM Criterion Summary

Implementation by May 2008	Yes
Enforceable	-
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	Yes

Issues

- Potential voluntary measure for expansion.
- Measure is being implemented in the region. May need to address implementation issues. .

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Commuter Parking Tax

Quick Reference: Commuter Parking Tax
Measure Name: Commuter Parking Tax

Description:
Implement daily tax on employers or employees that match certain commuting/parking criteria.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	No
No Adverse Impacts	No
Reductions >0.1 tpd	-

Issues

- Mandatory Measure: This measure would require state-level legislation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with new legislation.
- Year of first benefits is 2009.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Market Based Parking Charge at Federal Facilities

Quick Reference: Federal Parking
Measure Name: Market Based Parking Charge at Federal Facilities

Description:
Negotiate agreement with federal government to charge market rate for daily parking for all employees.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Issues

Implementation by May 2008	No
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

- Potential voluntary measure.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Parking Impact Fee: All Parking

Quick Reference: Parking Fee
Measure Name: Parking Impact Fee: All Parking

Description:
Levy annual impact fee on every parking space in nonattainment area.

RACM Determination: No
Reason: Will not provide reductions by May 2008

RACM Criterion Summary

Implementation by May 2008	No
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	No
Reductions >0.1 tpd	-

Issues

- Mandatory Measure: This measure would require state-level legislation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with new legislation.
- Year of first benefits is not known.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Free Parking for Carpools/Vanpools

Quick Reference: Carpool Parking
Measure Name: Free Parking for Carpools/Vanpools

Description:
Provide free reserved parking spaces for all carpools or vanpools.

RACM Determination: No
Reason: No creditable emission reductions

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	No
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

- Potential voluntary measure.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Employer Parking Cash-Out

Quick Reference: Parking Cashout
Measure Name: Employer Parking Cash-Out
RACM Determination: No
Reason: No creditable emission reductions

Description:
Implement program encouraging or requiring employers to provide the value of subsidized parking to employees who use alternative commute strategies.

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	No
Reductions >0.1 tpd	-

- Potential voluntary measure.

- Potential adverse impacts.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Remove Trash Trucks From Area Streets

Quick Reference: Barge Trash **Description:**
Measure Name: Remove Trash Trucks From Area Streets Reduce use of trash trucks through transport of trash by barge.

RACM Determination: No
Reason: No creditable emission reductions

RACM Criterion Summary

Issues

Implementation by May 2008	-
Enforceable	No
Technologically Feasible	-
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

- Potential voluntary measure.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Clean Air Partners: Air Quality Action Days

Quick Reference: Air Quality Action Days
Measure Name: Clean Air Partners: Air Quality Action Days

Description:
Take a variety of actions on Air Quality Action Days to reduce emissions and improve air quality (free transit, telework, carpool).

RACM Determination: No
Reason: No creditable emission reductions

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

This is an episodic measure.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Clean Air Partners: Public Outreach and Education

Quick Reference: Clean Air Partners
Measure Name: Clean Air Partners: Public Outreach and Education
RACM Determination: No
Reason: No creditable emission reductions

Description:
Implement Strategic Communication Campaigns to Increase Public Awareness (reduce vehicle use).

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

- Existing voluntary measure.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Local Government Education Campaign

Quick Reference: Government Education
Measure Name: Local Government Education Campaign

Description:
Implement Strategic Communication Campaigns to Increase Local Government Air Quality Improvement Efforts (reduce vehicle use).

RACM Determination: No
Reason: No creditable emission reductions

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

- Potential voluntary measure.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Mass Marketing Campaign

Quick Reference: Mass Marketing
Measure Name: Mass Marketing Campaign

Description:
Marketing effort involving business-to-business advertising campaign in print media and on world wide web.

RACM Determination: No
Reason: No creditable emission reduction

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

- Potential voluntary measure.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Commuter Choice - State & Local Government Employees

Quick Reference: Commuter Choice
Measure Name: Commuter Choice - State & Local Government Employees
RACM Determination: No
Reason: No creditable emission reductions

Description:
Provide the region's local, state and municipal employees with transit benefits.

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Commuter Choice Tax Credit

Quick Reference: Comm Choice Tax Credit
Measure Name: Commuter Choice Tax Credit

Description:
Employers subsidize employees' monthly transit or vanpool costs and receive a tax credit for incurred expenses.

RACM Determination: No
Reason: No creditable emission reductions

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

- Potential voluntary measure.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Commuter Operations Center

Quick Reference: Commuter Operations
Measure Name: Commuter Operations Center

Description:
Provides commuter assistance services, including carpool and vanpool ridematching.

RACM Determination: No
Reason: No creditable emission reductions

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

- Existing voluntary measure.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Guaranteed Ride Home

Quick Reference: Ride Home
Measure Name: Guaranteed Ride Home

Description:
Provides free rides home in event of unexpected emergency or unscheduled overtime to commuters using public transport.

RACM Determination: No
Reason: No creditable emission reductions

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

- Existing voluntary measure.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Integrated Rideshare

Quick Reference: Rideshare
Measure Name: Integrated Rideshare

Description:
Provides transit, park & ride, and telecenter information to all commuters on a matchlist.

RACM Determination: No
Reason: No creditable emission reductions

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

- Existing voluntary measure.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.

Measure -- Interactive Rideshare Kiosks

Quick Reference: Kiosks
Measure Name: Interactive Rideshare Kiosks
RACM Determination: No
Reason: No creditable emission reductions

Description:
Transportation Information Kiosks in Maryland, Virginia and the District of Columbia.

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

- Existing voluntary measure.

Estimated Cost Effectiveness	
Estimated Reductions	

Summary Analysis

Not RACM. No creditable emission reductions.
