

Appendix

Analysis of Potential Area Source Measures

*** * *DRAFT February 2006* * ***

last updated February 7, 2006

Potential Area Source RACM Measures in the Metropolitan Washington Region

Quick Reference	Measure Name	Definition	RACM	Reason
Upwind AIMS	Expand OTC AIMS Rule	Expand OTC AIMS Rule to Upwind Counties.	-	Under Discussion at IAQC
Upwind Consumer Products	Expand OTC Consumer Products Rule	Expand OTC Consumer Product Rule to Upwind Counties.	-	Under Discussion at IAQC
Upwind MERR	Expand OTC Mobile Equipment Repair and Refinishing Rule	Expand OTC Mobile Equipment Repair and Refinishing Rule to Upwind Counties.	-	Under Discussion at IAQC
Upwind PFC	Expand OTC Portable Fuel Containers Rule	Expand OTC Portable Fuel Containers Rule to Upwind Counties.	-	Under Discussion at IAQC
Upwind Solvent Cleaning	Expand OTC Solvent Cleaning Rule	Expand OTC Solvent Cleaning Rule to Upwind Counties.	-	Under Discussion at IAQC
Upwind Fuels	Upwind Fuels Controls	Expand Use of Reformulated Gasoline to Upwind Counties. Consider OTC Regional Fuels Initiative.	-	Under Discussion at IAQC
Upwind Stage I	Expand Stage I Vapor Recovery	Expand Requirements for Stage I Vapor Recovery to Upwind Counties.	-	Under Discussion at IAQC
Upwind Stage II	Expand Stage II Vapor Recovery	Expand requirements for Stage II Vapor Recovery to Upwind Counties.	-	Under Discussion at IAQC
Upwind Ports	Control Upwind Port Emissions	Pursue approaches to reduce land-based port emissions.	-	Under Discussion at IAQC
Expand RACT	Expand Presumptive RACT Requirements	Expand Surface Cleaning/Degreasing/Auto Repair Requirements.	No	Will not provide reductions by May 2008
Gas Can Replacement	"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
AIMs Phase II	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
CP Phase II	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 Incineration	RACT Update: Control Industrial Incineration	Implement programs to reduce emissions from industrial incineration.	No	Will not provide reductions by May 2008
Heating Oil Stds	Home Heating Oil Standards	Adopt OTC model rule on standards for home heating oils.	No	Will not provide reductions by May 2008
Asphalt	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
Flaring	Control Landfills and Wastewater Facilities	Reduce the NOx and VOC emission limits for flares.	No	Will not provide reductions by May 2008
Open Burning	Expand Seasonal Open Burning Restrictions	Expand Prohibitions on Seasonal Open Burning.	No	No creditable reductions
Restaurants	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
Bakeries	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
Drycleaning	Control Drycleaning Facilities	Ban transfer systems in Petroleum Dry Cleaning.	No	Will not provide reductions by May 2008
Livestock Waste	Control Agricultural Sources	Implement programs to reduce emissions from livestock waste.	No	Will not provide reductions by May 2008
Ag Best Practices	Control Agricultural Sources	Encourage agricultural best practices, including those that reduce pesticide use.	No	No creditable emission reduction
Wineries	Control Fermentation Sources (wineries)	Reduce evaporative VOC emissions from the fermentation process at wineries.	No	Will not provide reductions by May 2008
Breweries	Control Fermentation Sources (breweries)	Reduce ethanol emissions from breweries.	No	Will not provide reductions by May 2008
Wastewater Treatment	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	De minimis
Fuel Facilities	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
Construction Maintenance	Control VOC Emissions from Construction and Maintenance	Reduce VOC emissions from roofing kettles.	No	Will not provide reductions by May 2008

Nat Gas Furnace	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
Nat Gas Water Heaters	Low-Emission Natural Gas Water Heaters	Adopt SCAQMD Rule 1121: Control of NOx from Residential Type Natural Gas Fired Water Heaters.	No	De minimis
Res Wood Burning	Control Residential Wood Burning	Implement program to reduce emissions from Wood-Burning Fireplaces and Wood Stoves. Adopt OTC Model Rule.	No	Will not provide reductions by May 2008
Restrict Land Use	Control Growth and Development: Land Use Restrictions	Implement land use restrictions to control residential, commercial, and industrial development in the nonattainment area.	-	-
Development Mitigation	Control Growth and Development: Mitigate New Development	Mitigate emissions from new development.	-	-
Urban Heat Island	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
Episodic Measures	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
Procurement	Green Procurement Policy	Establish procurements policies that foster emission reduction (paints, solvents, coatings, asphalt, roofs, building materials, AFVs, EE office equipment, ULSD).	No	No creditable emission reduction
Enforce Open Burning	Enhanced Enforcement of Area Source Regs: Open Burning	Enhance enforcement of seasonal open burning restrictions.	No	No creditable emission reductions
Enforce Solvent Cleaning	Enhanced Enforcement of Area Source Regs: Solvent Cleaning	Enhance enforcement of surface cleaning rules.	No	No creditable emission reductions
Compliance Audits	Enhanced Enforcement: Environmental Partnerships/Pollution Prevention Initiatives	Voluntary compliance audits, encourage low emitting technology (swap out solvent machines)	No	No creditable emission reductions

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: -
Reason: Under Discussion at IAQC

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.
- 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 -- 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: -
Reason: Under Discussion at IAQC

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.
- 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 -- Expand OTC Mobile Equipment Repair and Refinishing Rule

Quick Reference: Upwind MERR
Measure Name: Expand OTC Mobile Equipment Repair and Refinishing Rule
RACM Determination: -
Reason: Under Discussion at IAQC

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.
- 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 -- 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: -
Reason: Under Discussion at IAQC

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.
- 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 -- 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: -
Reason: Under Discussion at IAQC

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.
- 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 -- 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: -
Reason: Under Discussion at IAQC

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 Measure. 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 IAQC is currently evaluating the potential for controls on upwind sources.
- 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 2009.

Summary Analysis

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

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: -
Reason: Under Discussion at IAQC

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 Measure. 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 IAQC is currently evaluating the potential for controls on upwind sources.
- 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 2009.

Summary Analysis

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

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: -
Reason: Under Discussion at IAQC

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, Maryland, and 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.
- Regulating regional fuel markets may pose difficult and unique challenges.

Summary Analysis

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

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: -
Reason: Under Discussion at IAQC

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 regulation by upwind states.
- 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 -- Expand Coverage of OTC Consumer Products Rule (Phase II)

Quick Reference:	CP Phase II	Description:
Measure Name:	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.
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 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: inks, lubricants, adhesives, sealants, etc

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

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Expand Presumptive RACT Requirements

Quick Reference: Expand RACT
Measure Name: Expand Presumptive RACT Requirements

Description:
Expand Surface Cleaning/Degreasing/Auto Repair Requirements.

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.
- EPA will require that all three states recertify sources for RACT.
- Year of first benefits is 2009.

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Home Heating Oil Standards

Quick Reference: Heating Oil Stds **Description:**
Measure Name: Home Heating Oil Standards 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	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. 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.
- 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	Description:
Measure Name:	RACT Update: Control Industrial Incineration	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.
- Year of First Benefits is 2009.
- The technological feasibility of controlling smaller incineration sources and the potential for adverse impacts is not known at this time.

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

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

Quick Reference:	Gas Can Replacement	Description:
Measure Name:	"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.
RACM Determination:	No	
Reason:	No creditable emission reduction	

RACM Criterion Summary

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

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.

Estimated Cost Effectiveness	
Estimated Reductions	

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: 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.
- 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.

Measure -- Expand Seasonal Open Burning Restrictions

Quick Reference:	Open Burning	Description:
Measure Name:	Expand Seasonal Open Burning Restrictions	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	-

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 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 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.

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	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 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.

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.

Measure -- Control Agricultural Sources

Quick Reference: Livestock Waste
Measure Name: Control Agricultural Sources

Description:
 Implement programs to reduce emissions from livestock waste.

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 governments to develop new regulations or to develop new innovative programs to reduce emissions from livestock waste.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- This measure may be more applicable in rural counties outside the nonattainment area.
- 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.

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	-
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 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)

Quick Reference: Wineries
Measure Name: Control Fermentation Sources (wineries) **Description:**
Reduce evaporative VOC emissions form the fermentation process at wineries.
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 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 Fermentation Sources (breweries)

Quick Reference: Breweries
Measure Name: Control Fermentation Sources (breweries) **Description:** Reduce ethanol emissions from breweries.

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 governments to develop regulations affecting breweries.
- 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

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 Determination: No
Reason: De minimis

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 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.

Summary Analysis

Not RACM. Will not provide reductions by 2008. De minimis.

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	Yes
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	Description:
Measure Name:	Control VOC Emissions from Construction and Maintenance	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	-
Economically Feasible	-
No Adverse Impacts	-
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.

Measure -- Low-Emission Natural Gas Furnaces

Quick Reference: Nat Gas Furnace
Measure Name: Low-Emission Natural Gas Furnaces

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 Determination: No
Reason: De minimis

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 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 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	Yes
Technologically Feasible	Yes
Economically Feasible	-
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 de minimis.

Measure -- Control Residential Wood Burning

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

Description:
 Implement program to reduce emissions from Wood-Burning Fireplaces and Wood Stoves. Adopt OTC Model Rule.

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 regulation by Maryland, Virginia and the District.
- All three states require well over 12 months to develop, pass and require compliance with a regulation.
- Ozone season emission reductions may be minimal. Candidate as a PM measure.
- Year of first benefits is 2009.

Summary Analysis

Not RACM. Will not provide reductions by May 2008.

Measure -- Control Growth and Development: Land Use Restrictions

Quick Reference: Restrict Land Use
Measure Name: Control Growth and Development: Land Use Restrictions
RACM Determination: -
Reason: -

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

RACM Criterion Summary

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

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

Measure -- Control Growth and Development: Mitigate New Development

Quick Reference: Development Mitigation **Description:**
Measure Name: Control Growth and Development: Mitigate New Mitigate emissions from new development.
 Development
RACM Determination: -
Reason: -

RACM Criterion Summary

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

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

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	Yes
Enforceable	No
Technologically Feasible	Yes
Economically Feasible	-
No Adverse Impacts	Yes
Reductions >0.1 tpd	-

Estimated Cost Effectiveness	
Estimated Reductions	

Issues

- Voluntary measure. May be included as part of the Innovative Measures Bundle.
- Approach may have use in demonstrating attainment.
- Further guidance is needed from EPA on how to take credit for urban heat island mitigation strategies.

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

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

Issues

- 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 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 procurements 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	-
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	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	Yes
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 a 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 **Description:** Enhance enforcement of surface cleaning rules.
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	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 a RACM.

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

Quick Reference: Compliance Audits
Measure Name: Enhanced Enforcement: Environmental Partnerships/Pollution Prevention Initiatives
RACM Determination: No
Reason: No creditable emission reductions

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

RACM Criterion Summary

Issues

Implementation by May 2008	Yes
Enforceable	Yes
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 a RACM.
