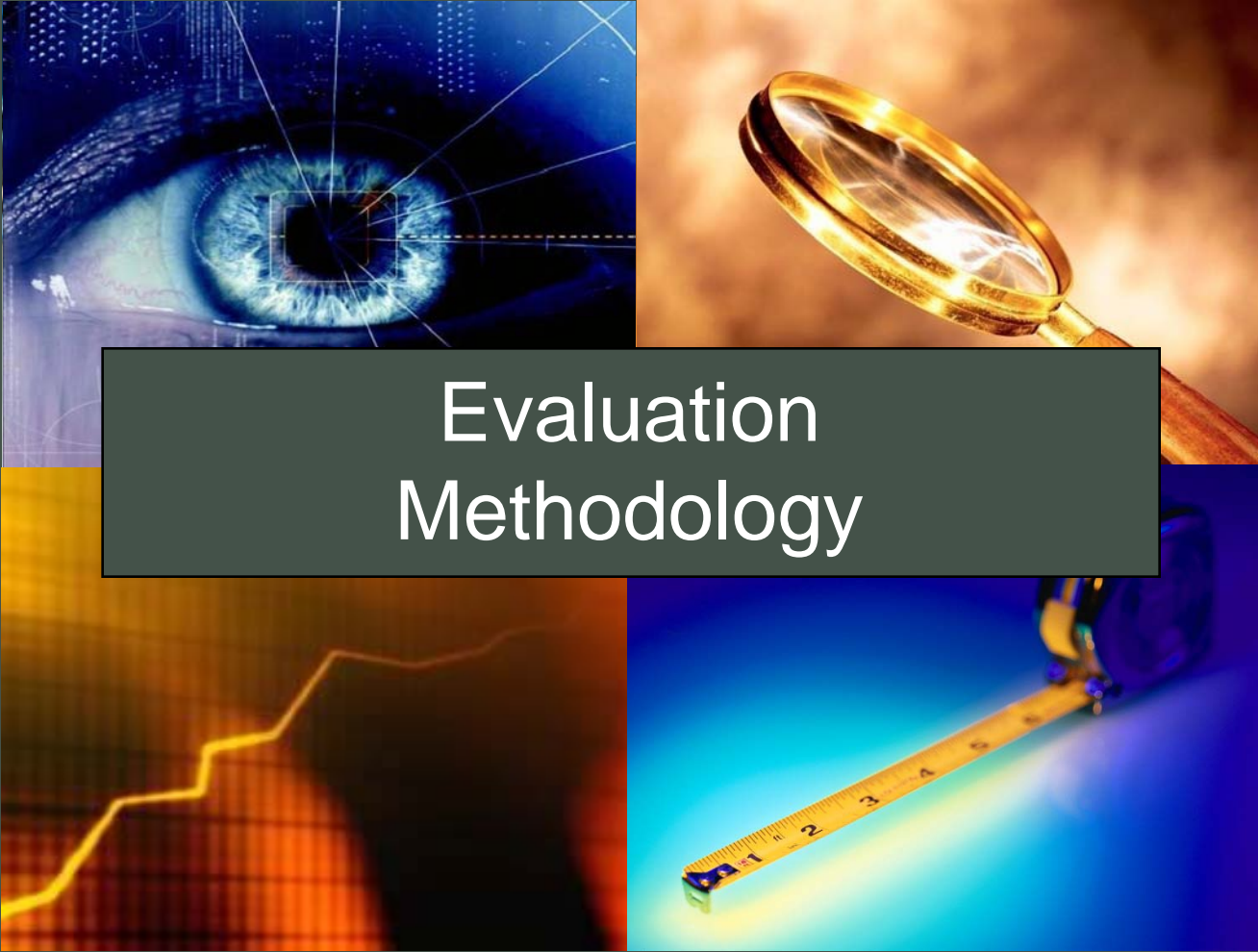


Commuter Connections TERM Evaluation 2008-2011 Interim Results



**Presentation to
Commuter Connections
Subcommittee
September 20, 2011
LDA Consulting
with
ESTC, CIC Research, CUTR**





Evaluation
Methodology

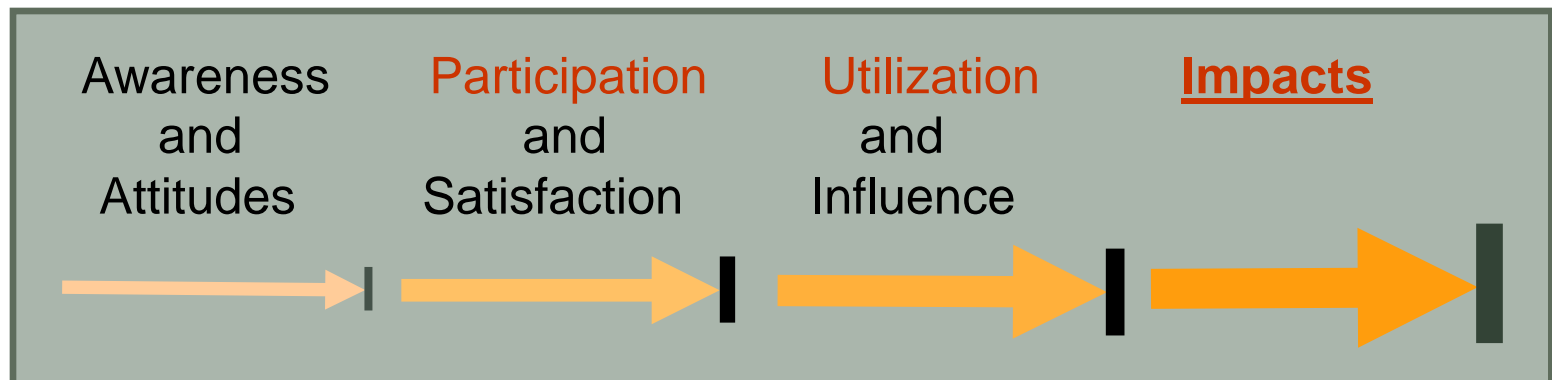
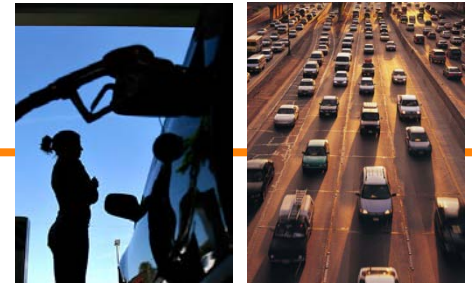
Objective of Evaluation

- Apply methodology outlined in Evaluation Framework to:
- Estimate effectiveness of four Commuter Connections TERMS
 - MD / VA Telework
 - Guaranteed Ride Home
 - Employer Outreach
 - Mass Marketing
- Document results of Commuter Operations Center
- Adjust impacts for overlap among programs

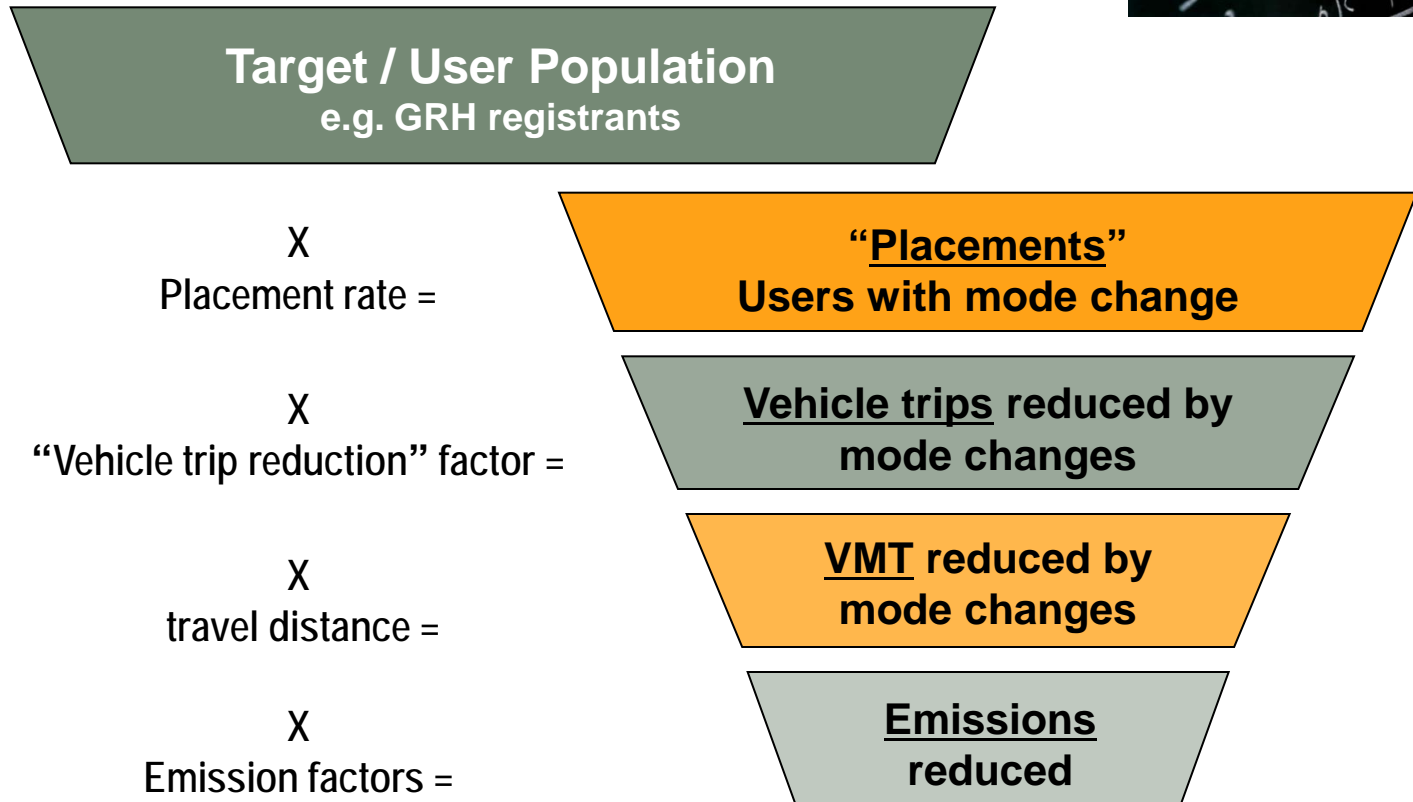


Performance Continuum

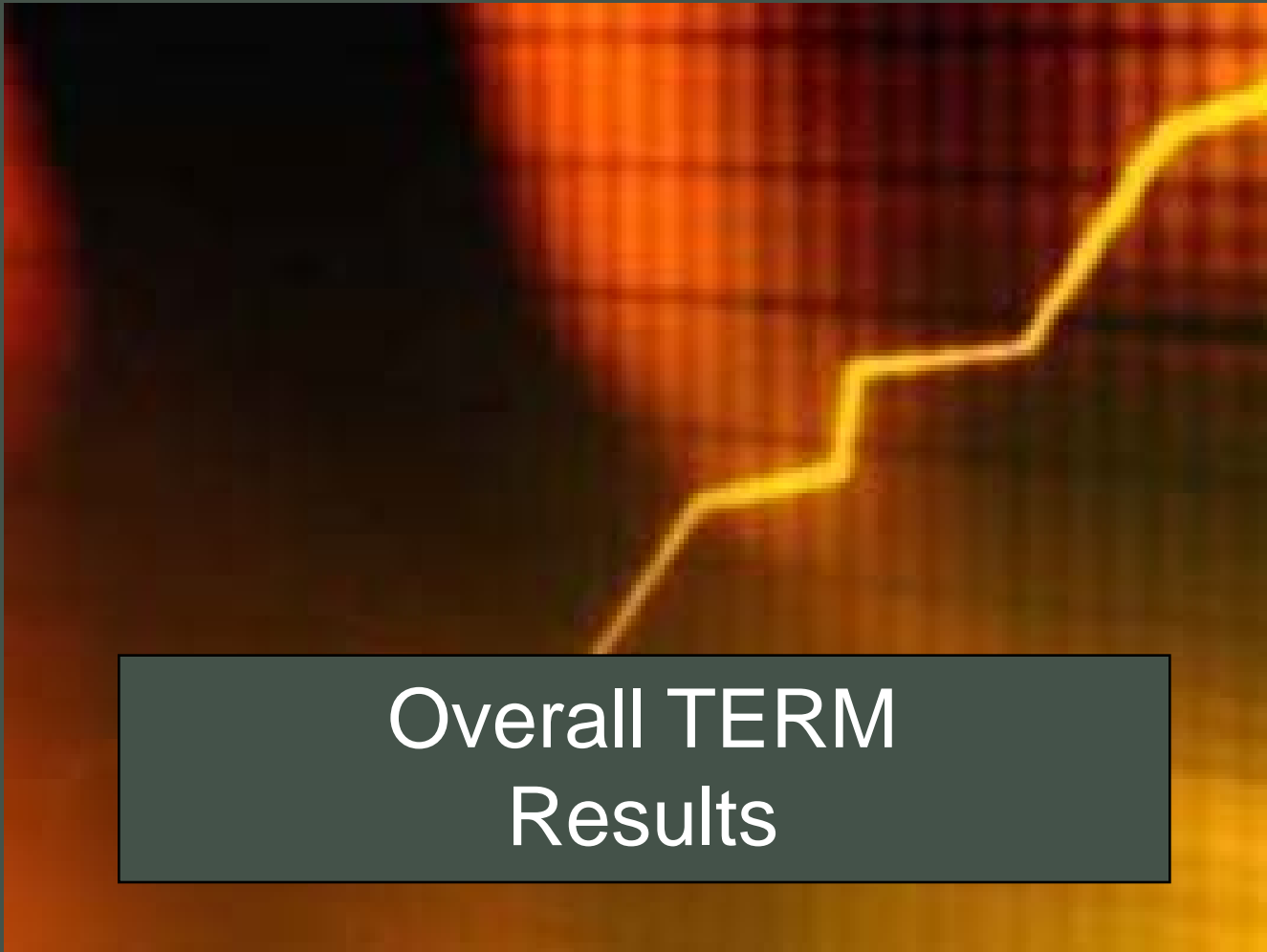
- Awareness – modes/programs
- Attitudes – willing to try modes
 - Participation – services used
 - Satisfaction – with programs
 - Utilization – mode / travel changes
 - Influences – motivations for change
 - Impacts of change (travel / AQ / energy)



Impact “Multiplier” Approach



- Data for multiplier factors derived from survey data



Impacts for All TERMS – 7/08-12/10

Comparison of collective goals against collective impacts
– including Commuter Operations Center

	<u>Goal</u>	<u>Impact</u>	<u>Net</u>
<u>Trips reduced</u>	107,224	110,668	<u>3,444</u>
VMT reduced	2,100,061	1,977,761	(122,300)
NOx reduced	1.067 T	0.740 T	(0.327) T
VOC reduced	0.637 T	0.456 T	(0.181) T

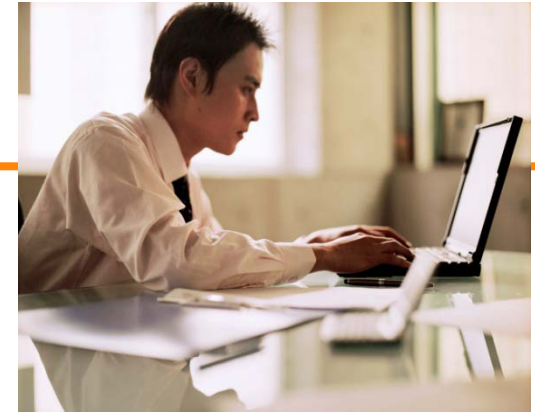
Met vehicle trip goal; 1% shortfall on VMT goal

Shortfall in emission goals due to reduced emission factors
for 2011 (cleaner cars)



MD / VA Telework

MD and VA Telework



- Direct assistance to commuters
 - 5.8% of regional teleworkers cited CC / COG as source of TW info
= **35,176 teleworkers**
- Assistance to employers / information materials
 - 2.2% increase in teleworkers at assisted worksites
= **60 new teleworkers**
- 35,237 teleworkers influenced by CC / COG
 - Each teleworker reduced 1.8 vehicle trips and 33 VMT each week

MD / VA Telework Impacts

	<u>Goal</u>	<u>Impact</u>	<u>Net</u>
<u>Number of TWs</u>	31,854	35,237	<u>3,383</u>
<u>Trips reduced</u>	11,830	12,499	<u>669</u>
<u>VMT reduced</u>	241,208	241,834	<u>626</u>
NOx reduced	0.122 T	0.099 T	(0.023) T
VOC reduced	0.072 T	0.062 T	(0.011) T

Met participation, vehicle trip, and VMT goals

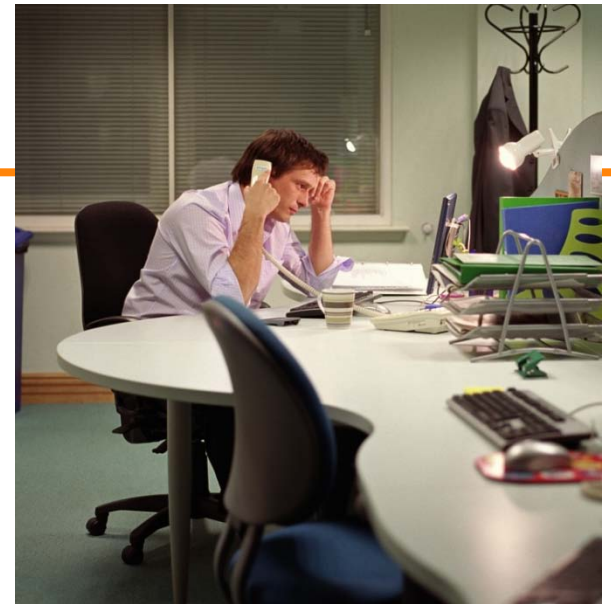
Impacts represent only MVTW contribution to regional TW (about 6% of regional TW trips reduced)



Guaranteed Ride
Home

GRH TERM

- 20,036 GRH registrants in 12/10
- 12,512 new registrants from 7/08 – 12/10
- 40% of registrants started new alt mode, but some alt mode users shifted from another alt mode
 - New users reduced 0.9 daily vehicle trips and 26 VMT
- GRH results were discounted:
 - Count only VMT within the MSA – registrants who live outside the MSA received only partial credit
 - Share 10% of credit with Mass Marketing TERM



GRH Impacts



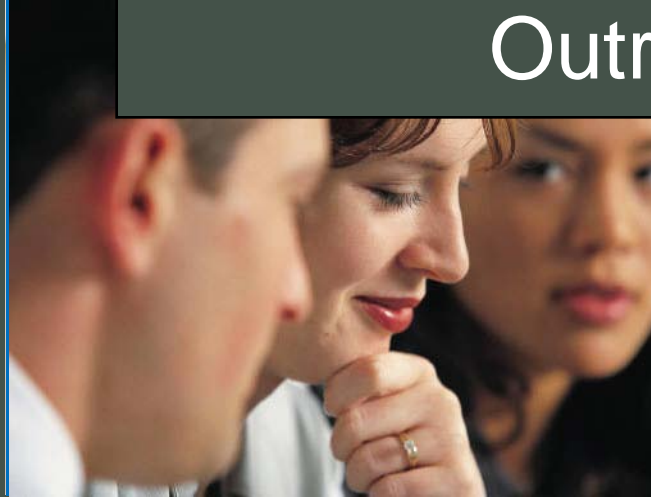
	<u>Goal</u>	<u>Impact</u>	<u>Net</u>
GRH participants	36,992	20,036	(16,956)
Trips reduced	12,593	6,992	(5,601)
VMT reduced	355,135	182,484	(172,652)
NOx reduced	0.177 T	0.067 T	(0.110 T)
VOC reduced	0.097 T	0.034 T	(0.061 T)

Did not meet goals – low GRH participation

Impact will increase somewhat when Jan-Jun 2011 participation is added



Employer Outreach



Employer Outreach

- Three impact components
 - Overall program
 - New / expanded programs
 - Bike services
- Impacts calculated for:
 - Employers “maintained” in EO from June 2008
 - Employers with new / expanded programs since 6/08
- Employers deleted since 2008 were replaced in the overall impact calculation



Employer Participation

<u>Employer Group</u>	<u>Employers</u>	<u>Employees</u>
Counted in impacts		
■ Maintained (no chg)	448	150,611
■ Expanded	267	173,346
■ New	265	104,323
Total in impact	980	428,280
Not counted in impacts		
■ Deleted since 6/08	301	68,418



EO – Employers by Jurisdiction*

<u>Jurisdiction</u>	<u>Total Empl</u>	<u>Employees</u>	<u>New Empl</u>
- Alexandria	42	9,371	22
- Arlington	150	42,280	33
- DC	308	136,633	220
- Fairfax	191	159,905	153
- Frederick	4	3,468	3
- Loudoun	8	6,852	3
- Montgomery	270	63,771	94
- Prince George's	5	3,730	2
- Prince William	4	2,170	2
- Tri-Co Council	1	100	0

*Totals are official, updated counts for impact calculations – totals will not match self-reported quarterly conformity statement

EO – Analysis

- Percentage vehicle trip reduction by program type
 - Overall EO program 9.7% reduction
 - Maintained (base) 12.3% reduction
 - Expanded (additional) 3.0% reduction
 - New 11.1% reduction



- EO – Bicycle
 - 209 employers offered bike services
 - 160,964 employees at bike worksites
 - 1.0% vehicle trip reduction from bike
 - Bike services greatly exceeded goals

EO Impacts – Overall



	<u>Goal</u>	<u>Impact</u>	<u>Net</u>
<u>Employers</u>	581	980	<u>399</u>
<u>Trips reduced</u>	64,644	78,166	<u>13,522</u>
<u>VMT reduced</u>	1,065,851	1,296,202	<u>230,351</u>
NOx reduced	0.549 T	0.477 T	(0.072) T
VOC reduced	0.343 T	0.301 T	(0.042) T

Met participation, vehicle trip, and VMT goals

Very small share of EO impacts (<1%) were assigned to MD/VA TW

EO Impacts – New / Expanded

	<u>Goal</u>	<u>Impact</u>	<u>Net</u>
<u>Employers</u>	96	532	<u>436</u>
<u>Trips reduced</u>	8,618	26,333	<u>17,715</u>
<u>VMT reduced</u>	140,622	432,880	<u>292,256</u>
<u>NOx reduced</u>	0.072 T	0.166 T	<u>0.094 T</u>
<u>VOC reduced</u>	0.046 T	0.101 T	<u>0.055 T</u>

Met all goals

High impact due to large number of employers with expanded programs
- 267 in 2011 vs 57 in 2008



Mass Marketing



Mass Marketing

Four MM components

- Direct Influence – Commuter changed mode after hearing ad – no other CC contact
- “Referred” Influence – Heard ad, then contacted CC for other service – Impact calculated as a percentage of GRH and COC (rideshare app) credits
- Pool Rewards carpool Incentive program
- Bike to Work Day



Mass Marketing Results

- Direct Influence
 - 39% of commuters recalled commute messages
 - 1% shifted to alt mode after ad
 - 84% who shifted said ad influenced change = 0.3% of regional commuters = **7,177 placements**
- “Referred” Influence – MM ads generated:
 - 3% of new COC (rideshare) apps = **193 placements**
 - 9% of new GRH apps = **498 placements**
- Pool Rewards
 - **121 participants**
 - 93% continued carpooling after program ended

BTW Day Results – 2008, 2009, 2010

- 24,013 total riders in three events – 11,794 “unique” riders
- Increased bike days after BTWD
 - 84% biked to work before
 - 10% new riders in summer
 - 22% increased riding in summer
 - 20% new/increased riding in fall
- New / increased riding added:
 - 1.5 bike dy/wk in summer
 - 1.7 bike dy/wk in fall/winter
 - Total new bike trips – 1,878 per day
- 48% DA to work on non-bike days
- Ave 9.6 miles one-way bike commute distance



Mass Marketing Impacts

	<u>Goal</u>	<u>Impact</u>	<u>Net</u>
Placements	11,023	10,293	(730)
Trips reduced	7,758	6,786	(972)
VMT reduced	141,231	74,602	(66,629)
NOx reduced	0.072 T	0.029 T	(0.043) T
VOC reduced	0.044 T	0.020 T	(0.024) T

MM fell slightly short of participation and trip goals

MM was well under VMT goals, because bicycle shifts were a much larger component of new mode use than expected

78% of vehicle trip impact from “direct influence,” 13% from BTW Day; 8% from “referred influence” and 1% from Pool Rewards



COC and Software Upgrades



Commuter Operations Center

- 65,451 commuters assisted from 7/08–12/10
 - 25,477 new or reapply requests
 - 38,974 follow-up requests
 - 35% placed into new alt modes
 - = 24,317 new alt mode users
- VMT results discounted for apps who live outside the MSA
- COC impacts reduced to account for overlap with GRH and MM



Software Upgrades



- Ridematch software upgrades
 - 18% of COC apps recalled receiving transit and/or P&R info on ridematch
 - 8% used information – either called transit agency or located P&R lot
 - 2.1% used info to change modes
 - Ave daily reductions – 0.75 vehicle trips and 31 VMT
- VMT discounted for apps who live outside the MSA

COC Impacts – Basic

	<u>Goal</u>	<u>Impact</u>	<u>Net</u>
Total apps	N/A	64,451	N/A
Trips reduced	10,399	5,493	(4,906)
VMT reduced	296,635	160,640	(135,995)
NOx reduced	0.147 T	0.059 T	(0.088) T
VOC reduced	0.081 T	0.032 T	(0.049) T

Did not meet goals – participation well below 2008 TERM level

Impact will increase somewhat when Jan-Jun 2011 participation is added



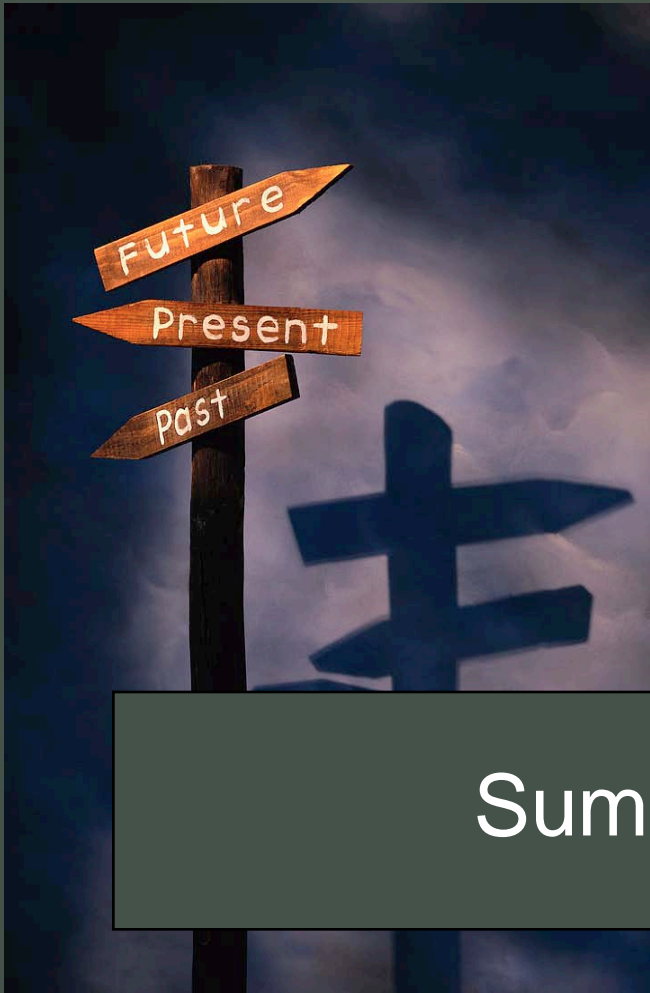
Software Upgrade

	<u>Goal</u>	<u>Impact</u>	<u>Net</u>
Placements	N/A	1,439	N/A
Trips reduced	2,370	732	(1,638)
VMT reduced	62,339	21,998	(40,341)
NOx reduced	0.031 T	0.008 T	(0.023) T
VOC reduced	0.017 T	0.005 T	(0.012) T

Did not meet goals – participation well below 2008 TERM level

Impact will increase somewhat when Jan-Jun 2011 participation is added





Summary

TERM Analysis Observations

- TERMS met the collective goal for vehicle trips reduced and came within 1% of the combined VMT goal
- CC programs overall (TERMs + COC) met all vehicle trip reduction goals; fell short of VMT goal by 6%
- These results reflect only the first 30 months of the 36-month evaluation period. The final impacts will be higher for most TERMS
- TERMS did not meet emissions goals, but this was due to a reduction in the 2011 emission factors, compared to the 2005 factors used when the goals were established
- Shortfalls in individual TERMS were generally related to lower than expected participation