



## 511 Regional Rideshare Program Performance Calculations Summary FY 14-15

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This report summarizes the “end-of-the-year” calculations as they pertain to the metrics that have been typically used by the 511 Regional Rideshare Program (RRP) to track its performance. Data for this document came from the Client Surveys completed in fall 2013 and spring 2014, 511 Rideshare’s RideMatch Service database and vanpool fleet data.

Each month, 511 Rideshare estimates the number of individuals who shifted to carpooling, vanpooling or other commute alternatives, known as “Clients Placed,” as a result of RRP activities. This calculation is based on three RRP activities: New or Updated Matchlist Requests, Placement Calls (also called Follow-up Customer Contact Calls), and New Vanpool Formation. Factors derived from the Clients Surveys are applied to the volume of each of these activities to determine Clients Placed. The FY 14-15 factors will be used in the program’s FY 15-16 monthly Report Cards. At the end of the year, the Report Cards will be updated with FY 15-16 data.

The impact of 511 Rideshare is also quantified through the calculation of Vehicle Trips Reduced (VTR), Vehicle Miles Traveled (VMT) Reduced and Greenhouse Gas (GHG) Emissions reductions. These calculations also depend on the outcomes of the number of clients placed and factors derived from the Client Survey results.

The following explains the factors derived from the Client Survey that are used to determine the Clients Placed, VTR, VMT and GHG reductions.

### Placement Rate

#### *Overall Placement Rate*

Description: The percentage of individuals in the 511 RideMatch Service database who reported a change to an alternative commute mode in the three months following service contact with the rideshare program.

	<b>Overall Placement Rate</b>
<b>Fall 14</b>	<b>28%</b>
<b>Spring 15</b>	<b>27%</b>
<b>Average</b>	<b>27.5%</b>
FY 13-14	36.5%
FY 12-13	29.5%
FY 11-12	28.5%
FY 10-11	--

The average Overall Placement Rate for FY 14-15 decreased from the FY 13-14 placement rate to 27.5 percent. Last year’s rate was very high as a result of behavior change due to the BART strikes in 2013 (36.5 percent). This year’s rate is comparable to but slightly lower than previous years (FY 11-12 and FY 12-13). This year, gas prices declined to low levels (often below \$3/gallon) during the latter part of 2014, likely contributing to less interest in carpooling.

*Placement Rate by Type*

Description: Different types of travel-mode change make up the placement rate. This factor is used in the Clients Placed calculation.

- Temporary – a switch was made from SOV (single occupant vehicle) to non-SOV following contact with the Rideshare Program but the non-SOV mode is no longer in use at the time of the Client Survey;
- On-going – current use of non-SOV, preceded by drive alone use during the previous reporting period; and
- Maintenance – a shift between non-SOV modes or additional members added to an existing carpool/vanpool.

A description of the different placement types, including the three types of maintenance placements (which reflect the type of change the carpool or vanpool experienced) has been included in Appendix A.

	Placement Type				
	Temporary	On-Going	Maintenance Type 3	Maintenance Type 4	Maintenance Type 5
<b>Fall 14</b>	<b>11%</b>	<b>2</b>	<b>13</b>	<b>1</b>	<b>1</b>
<b>Spring 15</b>	<b>9%</b>	<b>3</b>	<b>11</b>	<b>3</b>	<b>1</b>
<b>Average</b>	<b>10%</b>	<b>2.5</b>	<b>12</b>	<b>2</b>	<b>1</b>
FY 13-14	12%	5	14	4	1.5
FY 12-13	9.5%	5	10	3	2
FY 11-12	10.5%	3.5	8	4	2.5
FY 10-11	--	--	--	--	--

The Temporary and On-Going placement rates, which represent a change in travel behavior from the drive-alone mode, decreased by 4.5 percent from last year (17 to 12.5 percent). The Maintenance placement rates, which describe the continuation of travel in non-drive alone modes, decreased by 7.5 percent (from 19.5 percent to 12 percent). Again, these large changes reflect the impacts of the BART strikes in 2013. Compared to FY 12-13, the Temporary and On-Going placement rates decreased this year from 14.5 percent to 12.5 percent, and the Maintenance placement rates stayed constant at 15 percent.

**Matchlist Update Factor**

Description: the number of survey respondents who received an updated matchlist but not a new matchlist during the evaluation period; in this case, one quarter. This factor is derived from 511 RideMatch Service data collected each quarter that the Client Survey is conducted. This factor is used in the Clients Placed calculation. It represents the number of people who joined the 511 RideMatch Service previously but who generated new matchlists during the survey period.

	<b>Matchlist Update Factor</b>
<b>1<sup>st</sup> quarter</b>	<b>1.59</b>
<b>3rd quarter</b>	<b>1.48</b>
<b>Average FY 14-15</b>	<b>1.53</b>
FY 13-14	1.32
FY 12-13	1.39
FY 11-12	1.39
FY 10-11	--

**Received a Placement Call Only Factor**

Description: the number of survey respondents who received a Placement Call only and did not receive a matchlist in the previous three months. This factor is used in the Clients Placed calculation to prevent “double-counting” of people receiving a new matchlist, an updated matchlist, or placement assistance.

The purpose of a placement call is to provide personal assistance to an individual who has registered in the 511 RideMatch Service with finding a carpool or vanpool partner.

This information is calculated directly from the list of 511 RideMatch Service registrants who were asked to participate in the biannual Client Survey.

	<b>Received a Placement Call Only</b>
<b>Fall 14</b>	<b>24%</b>
<b>Spring 15</b>	<b>.07%</b>
<b>Average</b>	<b>12%</b>
FY 13-14	28.5%
FY 12-13	47.5%
FY 11-12	39.5%
FY 10-11	--

As part of a pilot program led by 511 Rideshare’s Commuter Services Department in the latter half of FY 14-15, matchlists were pulled prior to making each placement call; therefore, the number of individuals receiving only a placement call (and no matchlist) is very small. The information on the matchlist was offered to individuals during the placement call.

### Days per Year of Alternative Mode Use

Description: the number of days per year survey registrants used an alternative mode for their commute. This factor is used in the VTR calculation.

	<b>Alternative Mode Use (days/year)</b>
<b>Fall 14</b>	<b>126</b>
<b>Spring 15</b>	<b>127</b>
<b>Average</b>	<b>127</b>
FY 13-14	128
FY 12-13	123
FY 11-12	119
FY 10-11	--

The number of days individuals carpooled or used other alternative modes decreased by one day from FY 13-14. However, overall, alternative mode use duration is up since previous years.

This calculation reflects frequency of use by all Placement Rate Types.

### Average Commute Trip Length

Description: the average one-way commute trip length for survey respondents. This factor is used in the VMT reduced calculation.

	<b>Average Commute Trip Length (miles)</b>
<b>Fall 14</b>	<b>28.8</b>
<b>Spring 15</b>	<b>30.8</b>
<b>Average</b>	<b>29.8</b>
FY 13-14	28.6
FY 12-13	32.0
FY 11-12	29.5
FY 10-11	--

The average commute trip length for FY 14-15 increased by 1.2 miles.

The vanpool one-way trip distance was 54.9 miles. There was no change from last year.

Average commute trip length is self-reported by survey respondents.

**Prior SOV Factor**

Description: the percentage of survey respondents who currently use a non-SOV mode but previously drove alone or would have shifted to driving alone if they had not been assisted by 511 Rideshare to maintain their carpool/vanpool. This factor is used in the VTR calculation.

	<b>Prior SOV Factor</b>
<b>Fall 14</b>	<b>54%</b>
<b>Spring 15</b>	<b>59%</b>
<b>Average</b>	<b>56%</b>
FY 13-14	62.5%
FY 12-13	66%
FY 11-12	72%
FY 10-11	--

In FY 14-15, the Prior SOV Factor decreased to 56 percent. That is, this year a smaller share of carpoolers and other “alt mode” users switched from driving alone than in previous years.

In the past, the rideshare program used a factor of 0.55 for vanpool-only prior SOV use. Starting in FY 08-09, participants in newly formed vanpools (both drivers and passengers) were queried as to their prior mode choice. In FY 14-15, this factor for vanpoolers decreased to 46 percent from 56 percent

Prior Mode Use – Vanpools Only	Drove Alone	Public Transit (inc. shuttles)	Carpool or Vanpool
FY 14-15	46%	5%	49%
FY 13-14	56%	17%	18%
FY 12-13	61%	8%	31%
FY 11-12	64%	10%	26%
FY 10-11	--	--	--

**Drive Access Rate**

Description: the rate at which carpooling or vanpooling survey respondents drive alone or are dropped off at their pool pick-up location. This factor is used in the VMT reduced calculation.

	<b>Drive Access Rate</b>
<b>Fall 14</b>	<b>44%</b>
<b>Spring 15</b>	<b>31%</b>
<b>Average</b>	<b>38%</b>
FY 13-14	37%
FY 12-13	37.7%
FY 11-12	40.5%
FY 10-11	--

The drive access rate for vanpools was 60 percent.

### Average Access Trip Length

Description: the one-way distance from the survey respondent's point of origin to their carpool or vanpool pick-up spot. This factor is used in the VMT reduced calculation.

	Average Access Trip Length (miles)
<b>Fall 14</b>	<b>7.4</b>
<b>Spring 15</b>	<b>3.9</b>
<b>Average</b>	<b>5.7</b>
FY 13-14	5.1
FY 12-13	5.5
FY 11-12	6.4
FY 10-11	--

In FY 14-15, the average access trip length increase slightly by about 0.6 miles from the previous year. The average access trip length for vanpools was 11.3 miles.

### Average Carpool Occupancy

Description: the average number of riders in a carpool, as reported by survey respondents. This factor is used in the VTR calculation.

	Average Carpool Occupancy (riders/vehicle)
<b>Fall 14</b>	<b>2.6</b>
<b>Spring 15</b>	<b>2.7</b>
<b>Average</b>	<b>2.65</b>
FY 13-14	2.7
FY 12-13	2.75
FY 11-12	2.75
FY 10-11	--

A carpool is considered to have between two and six riders. The average vehicle occupancy for carpools decreased slightly by .05 from the previous year.

### Average Vanpool Occupancy

Description: the average number of riders in a vanpool, based on data collected for vanpools registering with 511 Rideshare.

	Average Vanpool Occupancy (riders/vehicle)
FY 13-14	8.7
FY 13-14	8.2
FY 12-13	8.5
FY 11-12	8.4
FY 10-11	--

A vanpool is considered to have between seven and 15 riders. In FY 14-15, the average vanpool occupancy is 8.7 riders per vehicle. This data is collected by 511 Rideshare when new vanpools are created and register with the program.

### **Vanpool Riders Not Registered in the 511 RideMatch Service**

Description: The number of vanpool riders who are not registered in 511 RideMatch Service. This metric is tracked by 511 Rideshare when vanpools register with the program. This metric is used in the Clients Placed calculation to prevent “double-counting” of placements resulting from “Matchlists Generated” versus “New Vanpools” formed.

The factor, based on FY 14-15 vanpool data, is 0.85.

Historical data for each of the metrics described in this report is included in Appendix B.

## APPENDIX A

### Placement Type Conditions

#### On-Going Placements:

1. current mode = non-SOV modes
2. past mode = drive alone/MC
3. past mode duration = all periods

#### Temporary Change Placements:

1. current mode = drive alone/MC
2. past mode = non-SOV
3. past mode duration = 2 months or less

#### Maintenance Placements Type 3:

1. current mode = non-SOV modes
2. past mode = non-SOV modes (different non-SOV)
3. past mode duration = all periods

#### Maintenance Placements Type 4:

1. current mode = carpool or vanpool
2. past mode = same as current mode
3. past mode duration = all periods
4. "I have more riders in my pool" or "I have the same number of riders in my pool, but the people have changed."

#### Maintenance Placements Type 5:

1. current mode = carpool or vanpool
2. past mode = carpool or vanpool (same)
3. past mode duration = all durations
4. "I've changed pools."

## APPENDIX B

### Historical Data

#### Placement Rate by Type

Description: The percentage of individuals registered in the 511 RideMatch Service who reported a change to an alternative commute mode in the three months following service contact with the rideshare program. The Overall Placement Rate is the sum of the individual placement rate types (summarized in Appendix A).

	Fiscal Year ending in ...									
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Temporary	7.0%	9.5%	12.1%	11.8%	19.1%	n/a	7%	12.5%	14%	12%
On-going	9.4	8.2	7.1	4.1	3	n/a	4.5	6.5	6	6
Maintenance Type 3	4.3	0.7	3.8	2.8	0.2	n/a	18	15	10.5	13.5
Maintenance Type 4	3.6	2.0	4.1	4.6	14.7	n/a	4.5	3	1.5	3.5
Maintenance Type 5	2.0	3.0	1.0	2.5	3.7	n/a	2	1	1	2
<b>Overall</b>	<b>26.4%</b>	<b>23.4%</b>	<b>28.0%</b>	<b>25.8%</b>	<b>40.7%</b>	<b>26%</b>	<b>36%</b>	<b>38%</b>	<b>33%</b>	<b>37%</b>

	Fiscal Year ending in ...									
	2011	2012	2013	2014	2015					
Temporary	--	10.5%	9.5%	12%	10%					
On-going	--	3.5	5	5	2.5%					
Maintenance Type 3	--	8	10	14	12%					
Maintenance Type 4	--	4	3	4	2%					
Maintenance Type 5	--	2.5	2	1.5	1%					
<b>Overall</b>	--	<b>28.5%</b>	<b>29.5%</b>	<b>36.5%</b>	<b>27.5%</b>					

#### Matchlist Update Factor

Description: the number of survey respondents who received an updated matchlist but not a new matchlist during the evaluation period; in this case, one quarter. This factor is derived from 511 RideMatch Service data collected each quarter that the Client Survey is conducted.

#### Received a Placement Call Only Factor

Description: the number of survey respondents who received Placement Call only and did not receive a matchlist in the previous three months. This factor prevents "double-counting" in the program's Clients Placed calculations.

	Fiscal Year ending in ...									
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Matchlist Update Factor	n/a	n/a	n/a	n/a	1.43	1.16	1.38	1.30	1.37	1.21
Received a Placement Call Only Factor	0.305	0.278	0.15	0.321	0.374	0.377	0.14	0.08	0.295	0.445

	Fiscal Year ending in ...									
	2011	2012	2013	2014	2015					
Matchlist Update Factor	--	1.39	1.39	1.32	1.53					
Received a Placement Call Only Factor	--	0.395	0.475	0.285	.12					

**Days per Year of Alternative Mode Use**

Description: the number of days per year survey registrants used an alternative mode for their commute.

**Average Commute Trip Length**

Description: the average one-way commute trip length for survey respondents.

**Prior SOV Factor**

Description: the percentage of survey respondents who currently use a non-SOV mode but previously drove alone or had the potential of shifting to driving alone due to a change in their carpool or vanpool.

In the past, the rideshare program used the default value of 0.85 and did not calculate this factor annually.

**Drive Access Rate**

Description: the rate at which carpooling or vanpooling survey respondents drive alone or are dropped off at their pool pick-up location.

**Average Access Trip Length**

Description: the one-way distance from the survey respondent's point of origin to their carpool or vanpool pick-up spot.

**Average Carpool Occupancy**

Description: the average number of riders in a carpool, as reported by survey respondents.

In the past, the rideshare program used a default value of 3.33 and did not calculate this factor annually.

	Fiscal Year ending in ...									
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Alternative Mode use (days/year)	n/a	152	124	n/a	156	121	184	99	95	129
Avg. One-Way Trip Length (mi)	n/a	36.9	35.4	35.0	42.5	42.5	34.3	32.8	32.0	34.9
Prior SOV Factor	n/a	n/a	n/a	n/a	n/a	85%	50%	60%	69%	61%
Drive Access Rate	n/a	34.2%	43.0%	54.2%	47.6%	29%	41%	43%	42%	40.5%
Avg. Access Trip Length (mi)	n/a	3.2	4.3	3.3	4.9	5.9	9	6.3	5.5	6.25
Avg. Carpool (only) Occupancy	n/a	n/a	n/a	n/a	3.33	n/a	2.7	2.6	2.7	2.75

	Fiscal Year ending in ...									
	2011	2012	2013	2014	2015					
Alternative Mode use (days/year)	--	119	123	128	127					
Avg. One-Way Trip Length (mi)	--	29.5	32.0	28.6	29.8					
Prior SOV Factor	--	72%	66%	62.5%	56%					
Drive Access Rate	--	40.5%	37.7%	37%	37.5%					
Avg. Access Trip Length (mi)	--	6.4	5.5	5.1	5.7					
Avg. Carpool (only) Occupancy	--	2.75	2.75	2.7	2.65					