



# TRIP REDUCTION PROGRAM

Annual Report

2010

Maricopa County Air Quality Department

**CLEAN AIR**  
**MAKE**  
**MORE**



# Trip Reduction Program

July 1, 2009 – June 30, 2010

Max Porter, Director  
Air Quality Department

Prepared by  
Maricopa County Trip Reduction Program Staff  
A. Neil Yockey, Environmental Program Manager



Maricopa County Air Quality Department  
Trip Reduction Program  
1001 North Central Ave. – Ste 550  
Phoenix, AZ 85004  
(602)506-6750

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# Maricopa County

Air Quality Department

**SUBJECT:** Trip Reduction Program – Fiscal Year 2010 Annual Report

**DATES:** July 1, 2009 – June 30, 2010  
ADEQ Contract - EV06-0006 - Amendment 7

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## EXECUTIVE SUMMARY

During the Fiscal Year 2009-2010 (FY10) grant year, Maricopa County continued the Trip Reduction Program (TRP) and the voluntary “Clean Air Campaign”. Results were gathered from detailed statistical summary reports from each employee and student site participating in the program. During FY10, there were 3,058 sites in the TRP representing 1,185 companies. This year, the survey was administered to over 679,000 commuters. In addition, the TRP Task Force, along with the TRP staff, reviewed and approved 1,224 trip reduction plans. The following report tracks and analyzes the commuting habits of employees and students in Maricopa County.

The TRP is continually identifying new sites required to participate in the program. This ongoing effort has resulted in 210 new employee and student sites incorporated into the TRP and completing their baseline year during FY10. While companies phased in and out of the TRP, the number of active sites remained approximately 3,000 throughout the year.

An aggregate analysis of the sites processed during FY10, for both employee and student participants, produced the following statistical results: 1) commuters in the TRP saved 15,403 tons of pollution by using an alternate mode of transportation; and 2) the TRP’s e-survey was used by more companies than ever before, an increase of 21% year-over-year.

The TRP has two forms of its online e-survey. Employers can choose either the intranet or internet version. Overall, 199 companies had their employees use the e-survey this year. Fourteen companies programmed the intranet version onto their systems for their employees to use and 185 companies had their employees access the Maricopa County web-site for the internet form. While most of the larger companies used the intranet version, accounting for nearly one-third of all employees, a few large companies made the switch from intranet to internet e-survey allowing for TRP staff to lessen their support to employers and free-up IT resources.

Companies that used the e-survey saved the TRP from providing over 222,000 paper forms; this was an increase of 41% more surveys compared to last year. When TRP first started administering the e-survey, its goal was to have a 35% usage by all employees. This year, 38% of TRP employees used the e-survey to complete their survey. In addition to the time that TRP saves in processing surveys, those companies using the e-survey saved an estimated \$94,000 in administrative and processing costs for the TRP.

# **MARICOPA COUNTY REGIONAL TRIP REDUCTION PROGRAM 2010 Annual Report**

## **INTRODUCTION**

During Fiscal Year 2010, 3,058 employment sites were processed by the Trip Reduction Program (TRP). Of all the sites, 210 were baseline (first year sites). The TRP produces a detailed statistical summary report for each employment and student site. This year, we administered the survey to over 679,000 employees and students. In addition, the TRP Task Force, along with the TRP staff, reviewed and approved 1,224 Trip Reduction plans. The following report tracks and analyzes the commuting habits of employees and students in Maricopa County.

The 1988 Omnibus Clean Air Legislation laid the foundation for the Maricopa County TRP. Employers with 100 or more employees were required to (1) reduce the single occupancy vehicle rate (SOV) by 5% annually, (2) name a transportation coordinator, (3) provide trip reduction information to all employees and/or students, (4) conduct an annual trip reduction survey and (5) submit an annual trip reduction plan.

The Trip Reduction Ordinance (TRO) adopted by the Board of Supervisors in September 1992 became effective January 1, 1993. This ordinance expanded the TRP by requiring employers with 75 to 99 employees to participate. The 1993 ordinance also established a SOV floor of 60%, and it improved SOV rate and SOV target calculations.

The TRO was amended May 26, 1994 with the following changes effective July 1, 1994; (1) employer SOV reduction goals were increased from 5% for the first five target years to 10%, (employers in their sixth and subsequent target years have a SOV target of 5% annually), (2) employers with 50 to 74 employees were incorporated into the program and (3) employers were given credit towards SOV reduction goals for using Reduced Emission Vehicles (REV).

In May 1996, the TRO was amended and ten Equivalent Emission Reduction (EER) measures were implemented. The ordinance became effective in July 1997. The EER ordinance measures allow for credit to be given to companies toward meeting their trip reduction goals by implementing alternative air pollution reduction strategies. These strategies are listed on a separate form and submitted with their trip reduction surveys on an annual basis.

In the first program year of the TRP approximately 500 employers and 800 employment sites were affected by the TRP. The implementation of the 1993 TRO added 300 employers and 700 sites to the program. With the implementation of the 1994 TRO, there are currently over 1,100 employers and 3,000 sites affected by the TRP.

## **PROGRAM OVERVIEW**

The TRP is divided into two sections: Operations/Research Data Analysis and Plan Review/Monitoring.

### **Operations**

Operations section's primary responsibilities are: 1) coordinating survey delivery and processing data; 2) monitoring new employers for incorporation into the TRP; 3) tracking effected employers to ensure that questionnaires and other requirements are submitted on schedule; and 4) developing policies and procedures.

### **Research/Data Analysis**

The Research/Data Analysis section is responsible for analyzing survey data and generating Summary Analysis reports for each employment site; analyzing and measuring the overall impact of the TRP on reducing single occupant commutes; and producing quarterly, annual and special reports for internal and external requests. In FY10, the Research/Data Analysis section sent out 3,229 summary analyses for employers and schools. In addition, they completed reports and supplied statistical data results for employers, researchers, city planners, news affiliates and individuals.

### **Plan Review/Monitoring**

The Plan Review/Monitoring section reviews and evaluates all submitted TRP plans to determine if proposed strategies and/or incentives are adequate to achieve targeted SOV reductions. There were 1,224 TRP plans that were reviewed and approved by the Task Force and staff during FY10.

The Plan Review staff also monitors employers to ensure that trip reduction plans are implemented accordingly. Monitoring activities include on-site visits and phone calls to employers. This year there were 440 monitoring phone calls and 873 site visits made. Employers not in compliance with TRP's policies and procedures can receive a Notice of Violation (NOV). During FY10, 88 NOV's were issued to employers who did not meet the statutory requirements. Of those referred to the TRP Task Force for enforcement, all were withdrawn because of compliance.

### **Valley Metro/ RPTA**

Both the Maricopa County TRP and the Valley Metro/Regional Public Transportation Authority (RPTA) provide staff to coordinate the benefits of both the TRP and the Clean Air Campaign. The RPTA is a sub-contracted organization that provides training, technical assistance and promotional material to all effected organizations. During the past year, 18 training classes were conducted with a total of 505 attendees. Training sessions included formal Transportation Coordinator (TC) training, in-house workshops, and webinars. In addition, seven months of Transportation Coordinator Association (TCA) meetings were held in six locations. In all, 42 meetings were held with 694 in attendance. Over 11,000 technical assistance and consultative service contacts were made to Valley organizations. Now in its twenty-first year, the Clean Air Campaign continues to maintain a favorable rating by the public.

## ANNUAL REPORT METHODOLOGY

The Maricopa County Regional Trip Reduction Program's method for measuring employers' compliance with the program is based on an employer's current site year. This methodology allows for the aggregation of data by the current TRP program year. New employment sites are added on a continual basis. The total number of employees/students commuting patterns is measured to determine TRP's overall effectiveness on reducing single occupant vehicle trips and miles.

This year, aggregate data is only shown for the first program year (FY 1991) and the last five fiscal years. This is done to show how the TRP compares to the inaugural year and reflect the most recent trend of data. For purposes of maintaining consistency and tracking a company's historical data from one year to the next, data gathered for a company are based upon the company's anniversary date.

The calculation for the number of miles needed to generate one-pound of pollution, for an average vehicle, was 45.5 for the first and second quarters and 45.8 miles for third and fourth quarters of the fiscal year. This factor was used to calculate the amount of pollution saved annually in the program. The Maricopa Association of Governments (MAG) has provided the data, citing EPA's Mobile 6A as its source.

The staff members of the Maricopa County Trip Reduction Program and the Regional Public Transportation Authority (RPTA) work closely to the benefit of both the TRP and the Clean Air Campaign. The RPTA is sub-contracted by the County to provide training, technical support and promotional materials to all organizations effected by the TRP.

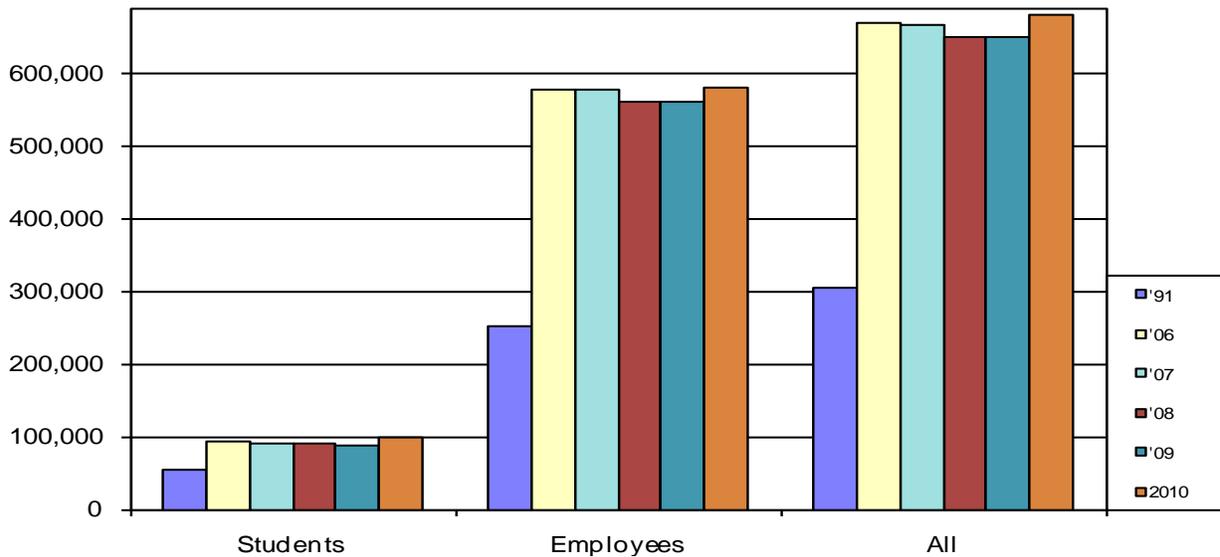
The FY10 Trip Reduction Program Final Report is highlighted with samples of program material, aggregate results of the annual survey, and the calculation methodology. Questions or comments should be addressed to the Maricopa County Air Quality Department, Trip Reduction Program, 1001 N. Central Ave. #550, Phoenix, AZ 85004.

## NUMBER OF TRP PARTICIPANTS

The Maricopa County region affected by the Trip Reduction Program (TRP) has recorded continual growth since the inception of the program in 1989. TRP's overall participation has increased **122%** since the first program year.

Based on current DES estimates for the Greater Phoenix-Glendale-Mesa metropolitan Area non-farm workforce, there are approximately 1,677,600 employees. TRP employees account for over 34.5% of those Maricopa County residents. In addition, 'Student' sites contribute another 100,172 participants to the overall population tracked by the TRP.

**Number of TRP Participants  
FY 1991 / FY 2006 - 2010**



The number of all TRP participants has steadily increased each year of the program. When compared to DES estimates for non-farm workforce, TRP employees increased by 3.2%, while the DES workforce showed a decrease of 1.9% from the previous year. The student population has remained fairly level over the previous four years, showing a slight decrease for this year. Program participation shows an average annual rate increase of 0.4% since FY 2006.

**Number of Participants**

Site Type	FY 91	FY 06	FY 07	FY 08	FY 09	<b>FY 2010</b>
Students*	53,943	92,409	89,657	90,392	89,017	<b>100,172</b>
Employees	251,112	576,777	576,969	559,728	561,492	<b>579,576</b>
All	305,055	669,186	666,626	650,120	650,509	<b>679,748</b>

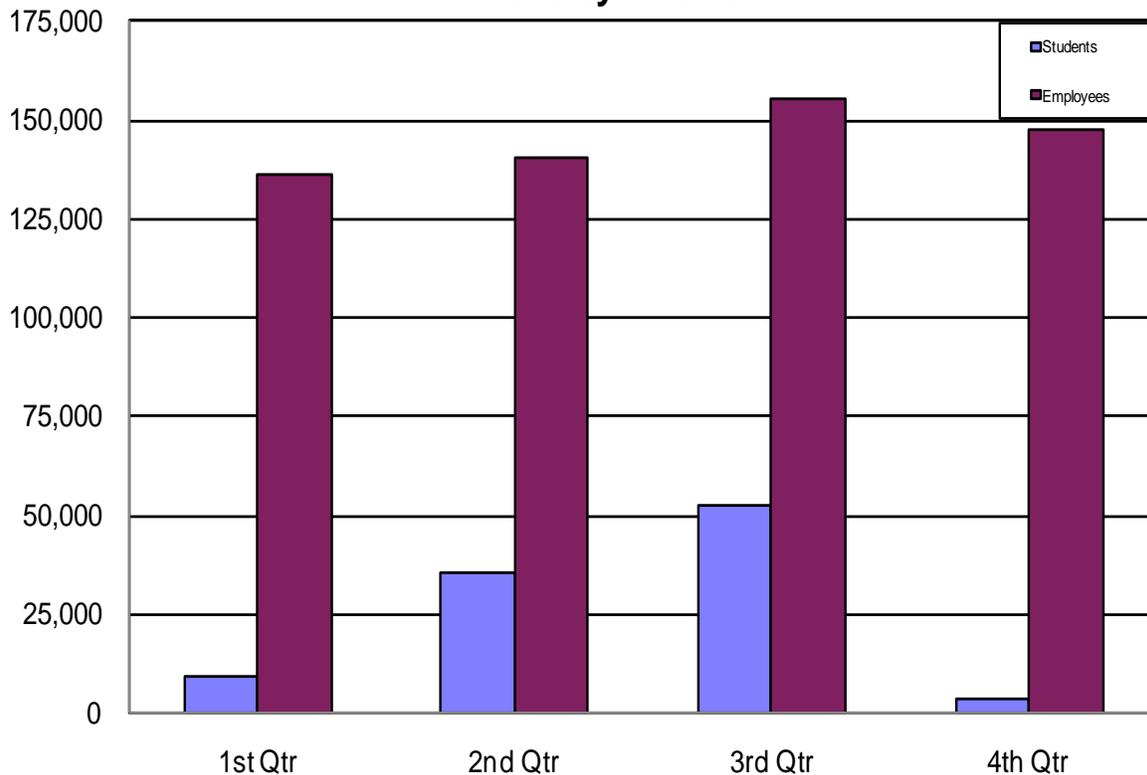
\*Student population includes high school juniors and seniors, colleges, universities and vocational institutions.

## TRP Participation by Quarter for FY 2010

During the fourth quarter, the TRP surveyed many of the larger companies and high schools. Most secondary schools, which make up 72% of the student population, surveyed in the second and third quarters. This ensures that high schools will receive their survey results before the end of the school year and have time to implement their TRP plan. For employees, the least amount of surveys administered was during the first quarter, which is traditionally lower because employees are taking time off during the summer months.

Site Type	1 <sup>st</sup> Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total Year
Students	9,116	35,200	52,348	3,508	100,172
Employees	136,238	140,702	155,385	147,251	579,576
All	145,354	175,902	207,733	150,759	679,748

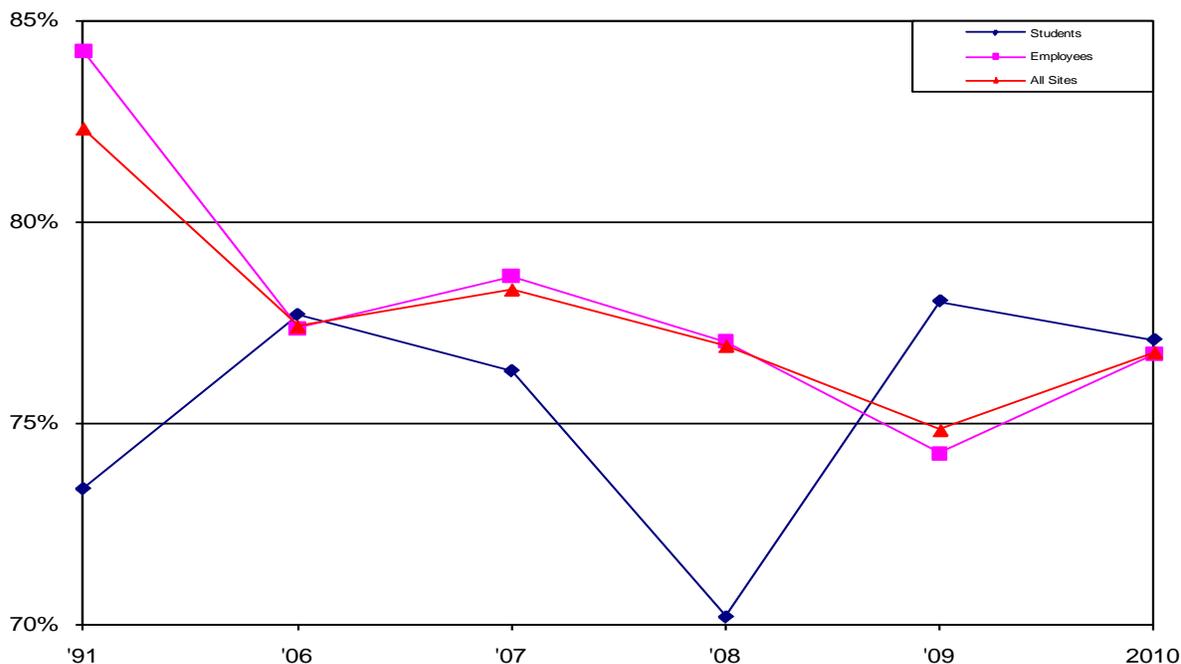
### Number of TRP Participants FY 2010 by Quarter



## TRP RESPONSE RATES

During FY10, 3,058 sites were analyzed. This included 2,932 'Employee' sites and 126 'Student' sites. The TRP questionnaire was administered to 679,748 employees and students this year with an overall response rate of 76.76%.

**Response Rates by Sites  
FY 1991 / 2006 - 2010**



The response rate is calculated by dividing the number of questionnaires completed by the number of the employees at the site. If the response rate for an employer is less than the required 60%, a company is directed to resurvey that site. The TRP continues to achieve high response rates each year. Because of this, data collected by the TRP is very comprehensive, and is requested by numerous outside agencies and organizations for detailed analysis.

The response rate for 'All' site types increased for this year. The student response rate was higher than the employee response rate, 77.05% and 76.71% respectively.

### Response Rates

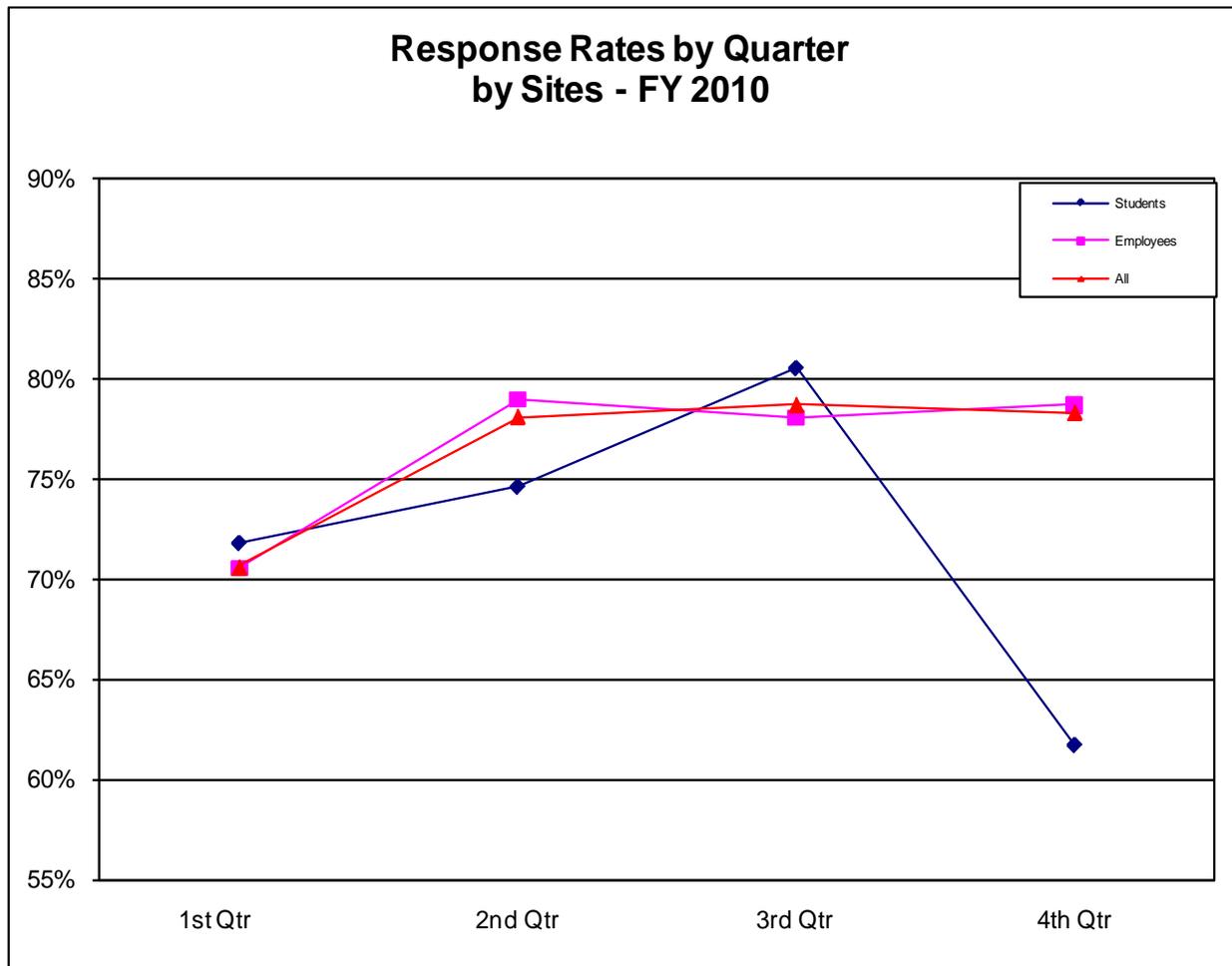
Site Type	FY 91	FY 06	FY 07	FY 08	FY 09	FY 2010
Students*	73.36%	77.67%	76.28%	70.19%	78.01%	<b>77.05%</b>
Employees	84.24%	77.35%	78.64%	77.02%	74.25%	<b>76.71%</b>
All	82.32%	77.40%	78.32%	76.92%	74.83%	<b>76.76%</b>

\*Student population includes high school juniors and seniors, colleges, universities and vocational institutions.

## TRP Response Rates by Quarter for FY 2010

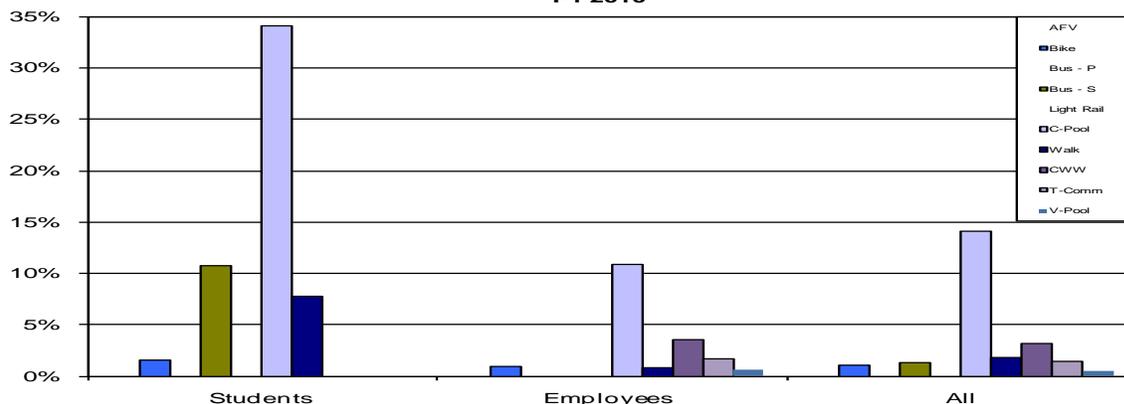
In FY10, the response rates fluctuated each quarter. Although there is no distinguishable pattern throughout the year, the third quarter had the highest response rates for 'All' sites. For 'Employee' sites, the third quarter had the highest response rates. 'Student' responses were their lowest during the fourth quarter when the majority of trade-school students were surveyed.

Site Type	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Current Year Average
Students	71.84%	74.66%	80.60%	61.72%	77.05%
Employees	70.55%	79.01%	78.10%	78.75%	76.71%
All	70.63%	78.14%	78.73%	78.35%	76.76%



## ALTERNATIVE MODE TRIPS

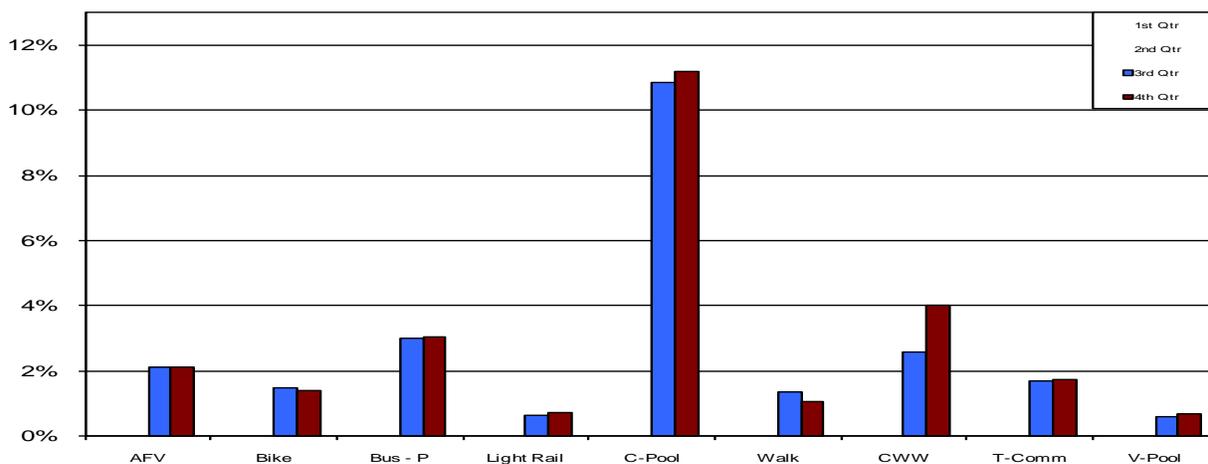
**Alternative Trips by Mode  
as a Percentage of Total Trips  
FY 2010**



TRP participants continue to use alternative modes more often each year. During this year, carpool usage continued to be the highest type of alternative mode used for 'All' site types. 'Student' and 'Employee' sites used carpooling as their primary alternative mode.

Students used carpooling for 34.1% of all their commuting trips. Other alternative modes used mainly by students were taking the bus (15.3%) and walking (7.8%). These three modes account for over 57% of commuting habits by students. Employees carpoled 10.9% of the time, while CWW accounted for 3.2% of alternative trips and taking the bus resulted in 2.4%.

**Alternative Mode Trips by Quarter  
as a Percentage of Total Trips  
FY 2010**



Carpooling continues to be the highest percentage of trips taken by alternative mode users. The first and fourth quarters showed the largest use of carpooling. The two other alternative modes mostly used by commuters (compressed work week and public bus) were used in the fourth quarter.

## POUNDS OF POLLUTION

TRP participants continue to use alternative modes of transportation for 27.0% of their commuting miles. In FY10, for 'All' sites, pounds of pollution saved daily totaled 118,486 pounds per day.

There were multiple circumstances that affected the results of the amount of pollution saved by the program: 1) because of newer and environmentally cleaner vehicles on the road, the pounds of pollution factor was recalculated mid-way through the year from 45.5 to 45.8 miles per one-pound of pollution, thus causing a decrease in pounds of pollution saved; and 2) there was an increase in the participation level, an increase of four-percent overall.

### Pounds of Pollution Saved by Mode

MODE	STUDENT SITES		EMPLOYEE SITES		ALL SITES	
	Miles Daily (Both - Ways)	Pounds of Pollution Saved Daily <sup>1</sup>	Miles Daily (Both - Ways)	Pounds of Pollution Saved Daily <sup>1</sup>	Miles Daily (Both - Ways)	Pounds of Pollution Saved Daily <sup>1</sup>
<b>Generated SOV</b>	481,912		9,918,802		10,400,714	
<b>Saved</b>						
AFV	20,774	454	286,816	6,262	307,590	6,716
Bike	8,698	190	47,856	1,045	56,554	1,235
Bus (Public)	48,282	1,054	297,812	6,502	346,094	7,556
Bus (School)	103,165	2,253			103,165	2,253
Carpool	514,678	11,238	2,087,924	45,588	2,602,602	56,826
Light Rail	26,288	574	50,306	1,098	76,594	1,672
CWW*			528,566	11,541	528,566	11,541
TeleComm*			308,546	6,737	308,546	6,737
Vanpool			1,058,947	23,121	1,058,947	23,121
Walk	20,926	457	17,028	372	37,954	829
<b>Alternative Mode Total</b>	742,811	16,220	4,683,801	102,266	5,426,612	118,486
<b>Total Miles</b>	1,224,723		14,602,603		15,827,326	

\* Miles not driven

<sup>1</sup> To calculate the pounds of pollution saved daily, the "Miles Daily" was divided by 45.5 for the first and second quarters and 45.8 for the third and fourth quarters. Using the third and fourth quarters as an example, 45.8 is the number of miles driven needed to generate one pound of pollution using the most recent standards.

## POLLUTION SAVED

TRP participants continue to save more pounds of pollution each year. This year alone, **the amount of pollution potentially saved by the 679,748 employees/students responding to the survey was estimated at 15,403 tons.**

### Total Pounds of Pollution Saved

Site Type	Pounds of Pollution Saved Daily	Tons of Pollution Saved Weekly <sup>2</sup>	Tons of Pollution Saved Annually <sup>3</sup>	Potential Tons of Pollution Saved by TRP Annually <sup>4</sup>
Students	16,220	40.5	2,018	2,736
Employees	102,266	255.7	13,295	17,320
All <sup>5</sup>	118,486	296.2	15,403	20,056

<sup>2</sup> “Tons of Pollution Saved Weekly” is calculated by dividing the “Pounds of Pollution Saved Daily” by 2000, and then multiplying the result by the number of trips taken weekly by an average commuter, which is set to be five by the TRP, i.e. for students,  $(16,220/2000) * 5 = 40.5$  tons.

<sup>3</sup> Weekly tons are then multiplied by 52 to calculate “Tons of Pollution Saved Annually”,  $40.5 * 52 = 2,018$  tons.

<sup>4</sup> “Potential Tons of Pollution Saved by TRP Annually” is calculated by extrapolating out to the number of TRP participants who had the survey administered to them. The “Tons of Pollution Saved Annually” is divided by the response rate, i.e. 75,454 students answered the survey for a response rate of 77.05% (.7705);  $2,018/.7705 = 2,736$ . All 100,172 TRP students could have saved 2,736 tons of pollution in FY 2010.

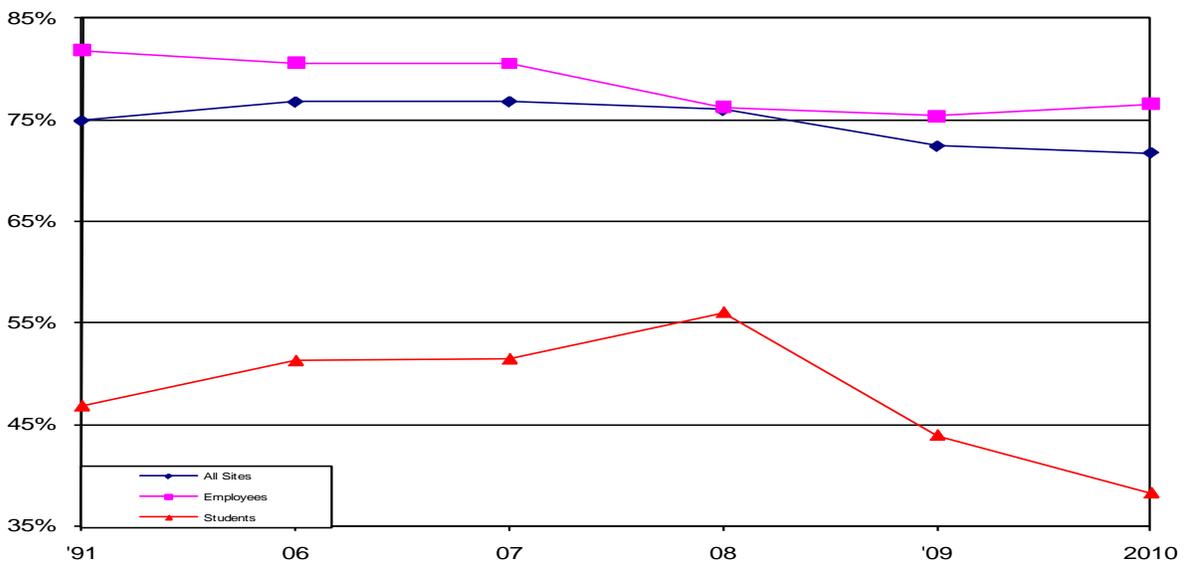
<sup>5</sup> The numbers for ‘All’ site types is calculated by adding the totals from the ‘Student’ site and ‘Employee’ site rows.

## SOV TRIP RATES

The SOV trip and SOVMT rates indicate how well a company is doing at reducing employee/student trips and miles. In order for a company to achieve their reduction goal for the year it must meet or exceed either one of these target rates.

Of the 3,058 sites surveyed, 2,848 were analyzed this year for the purposes of the aggregate data. There were 210 first year sites (baseline year sites) that were processed. However, their results are not aggregated since employers do not fully implement their incentives and/or strategies until their first year trip reduction plan has been approved.

**SOV Rates  
FY 1991 / 2006 - 2010**



The SOV trip rate is calculated by dividing the number of SOV trips by the total trips taken for all commuters. This is also done separately for 'Employee' sites and 'Student' sites in order to compare their rate of change.

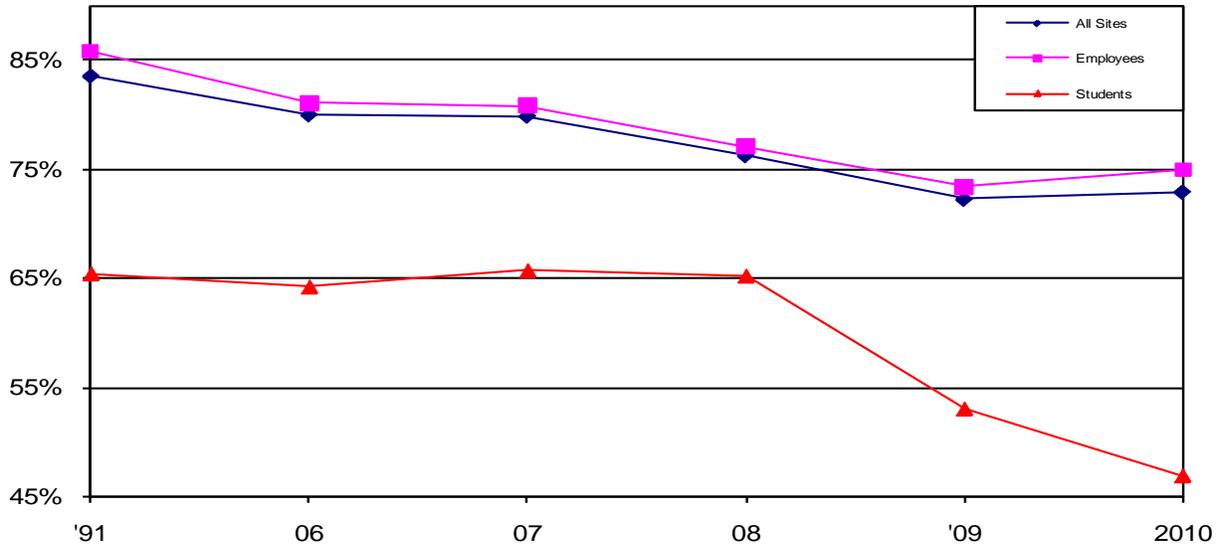
### Single Occupancy Vehicle (SOV) Trip Rate

	Students	Change from Previous Year	Employees	Change from Previous Year	All	Change from Previous Year
FY 91	46.78%		81.86%		74.92%	
FY06	51.23%		80.59%		76.80%	
FY07	51.40%	0.33%	80.57%	-0.02%	76.83%	0.03%
FY08	56.00%	8.94%	76.22%	-5.40%	75.97%	-1.12%
FY09	43.90%	-21.60%	75.38%	-1.10%	72.40%	-4.69%
<b>FY10</b>	<b>38.21%</b>	<b>-12.96%</b>	<b>76.53%</b>	<b>1.52%</b>	<b>71.44%</b>	<b>-1.32%</b>

## SOVMT RATES

This year the SOVMT showed an increase of 0.92% for 'All' sites when compared to last fiscal year. 'Student' and 'Employee' sites also showed the following rate changes, -11.52% and 2.18% respectively.

**SOVMT Rates  
FY 1991 / 2006 - 2010**



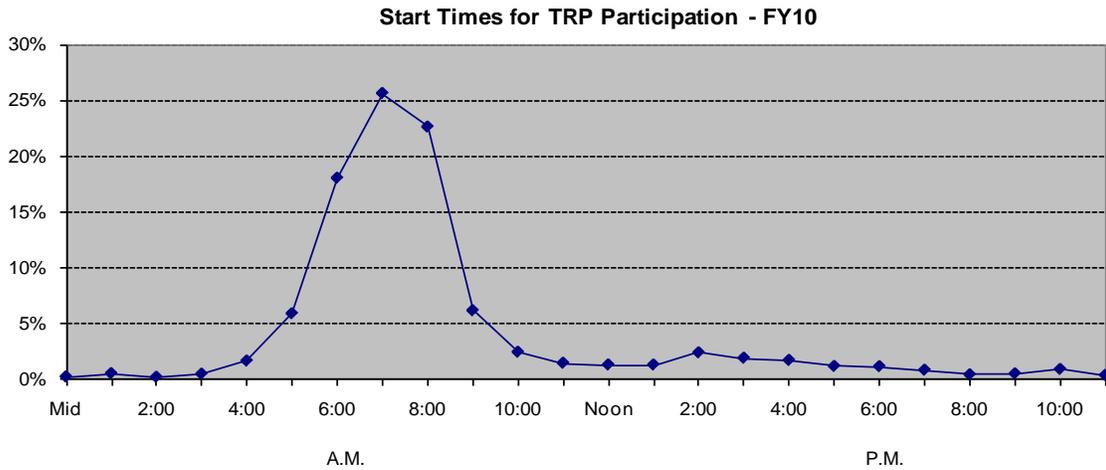
Similar to the methodology used for SOV trips, 2,848 sites were analyzed this year for the purposes of the aggregate data.

The SOVMT rate is calculated by dividing the number of SOV miles traveled by the total number of miles driven by all commuters. This is also done separately for 'Employee' sites and 'Student' sites in order to compare their rate of change.

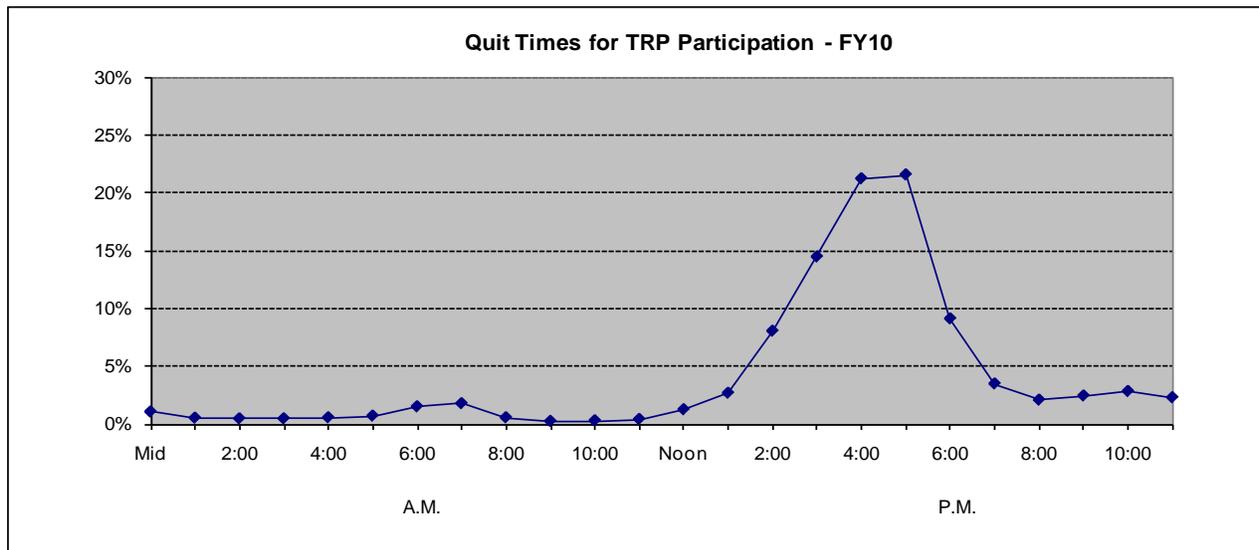
### Single Occupancy Vehicle Miles Traveled (SOVMT) Rate

	Students		Employees		All	
		Change from Previous Year		Change from Previous Year		Change from Previous Year
FY 91	65.49%		85.78%		83.57%	
FY06	64.29%		81.06%		80.02%	
FY07	65.78%	2.31%	80.82%	-0.29%	79.90%	-0.14%
FY08	65.29%	-0.75%	77.10%	-4.60%	76.29%	-4.52%
FY09	53.10%	-18.67%	73.37%	-4.83%	72.29%	-5.24%
<b>FY10</b>	<b>46.98%</b>	<b>-11.52%</b>	<b>74.97%</b>	<b>2.18%</b>	<b>72.96%</b>	<b>0.92%</b>

## COMMUTING TO WORK



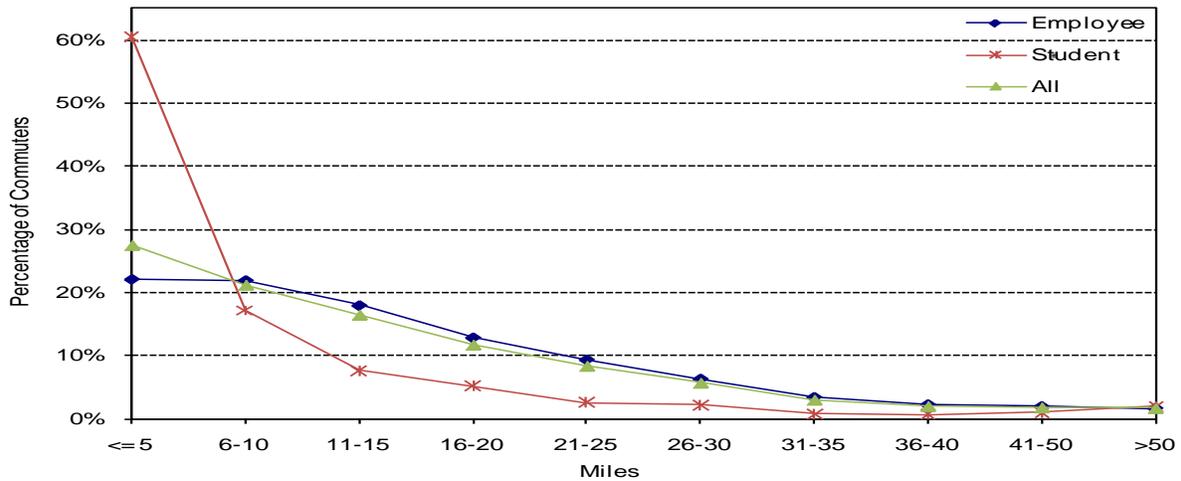
The peak hours for Maricopa County commuters traveling to work are between 5:00 a.m. and 8:00 a.m.; 72% of all commuters are on the road during this time, this is an increase of 3.1% from last year. During the morning rush, the time between 7:00 a.m. and 8:30 a.m. is the most heavily traveled. There is also a second shift peak between 2:00 p.m. and 3:30 p.m. when commuters make their way to work.



Conversely, quit times for commuters peak between 2:00 p.m. and 7:00 p.m.. Over 74% of all commuters are leaving the workplace during this time. However, the peak for departing workers is not as great as that of arrival times. This is caused by workers who complete their eight-hour shifts prior to the afternoon rush or those who put in extended hours. The time between 5:00 p.m. and 6:00 p.m. showed the largest numbers of commuters leaving from work.

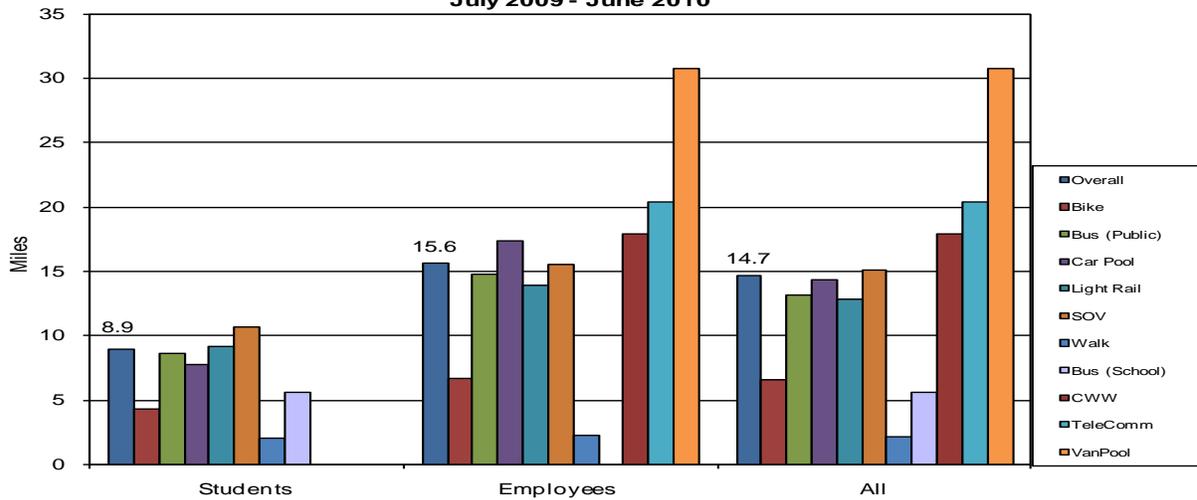
### HOW FAR IS THE COMMUTE?

### Commute to work in Miles Employees



In FY10, the typical TRP commuter (employee or student) could have expected to drive, on the average, 14.7 miles one-way to work or school. While the average drive for an employee was 15.7 miles to work, students drove an average of 8.9 miles one-way to school. Compared to previous years' data, more commuters are experiencing longer drives. Overall, 26.7% of all TRP participants drive less than five miles to work/school. Another 42.5% of the commuters live between 11 and 30 miles from work. Over 8.7% of all commuters have a drive of over 30 miles.

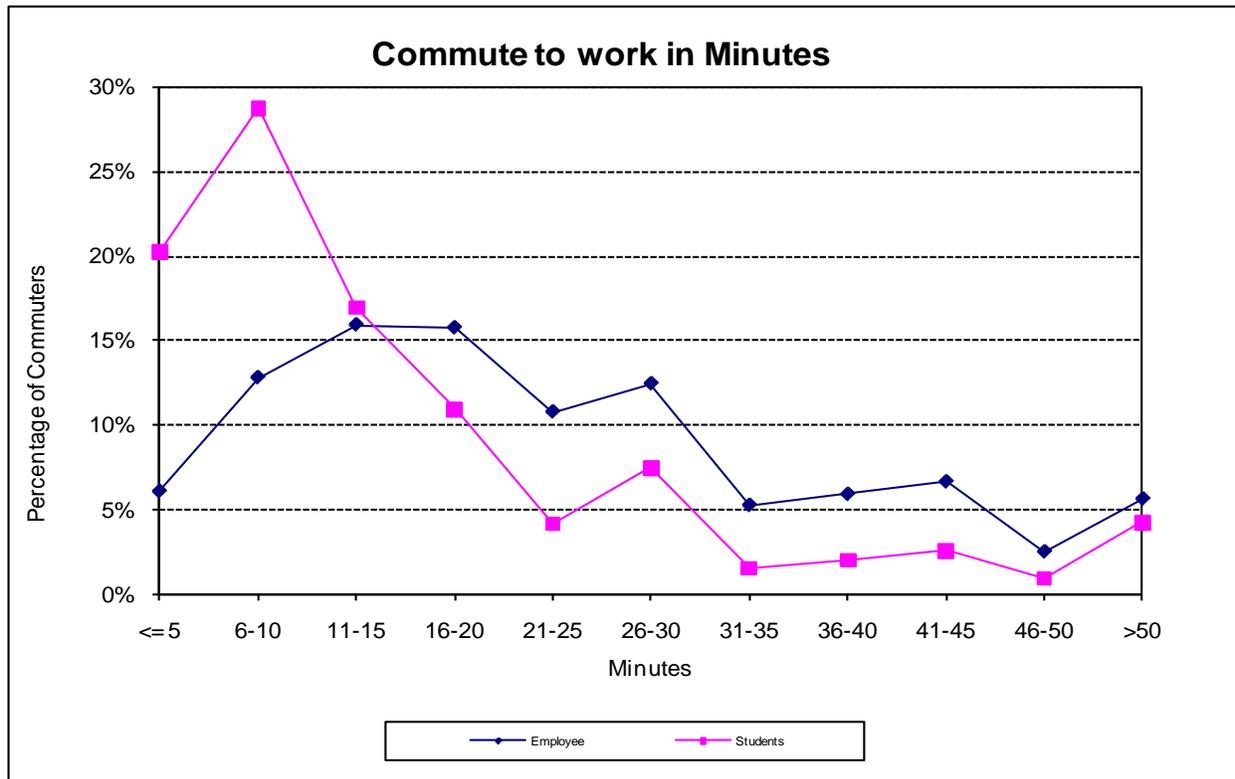
### AVERAGE TRIP LENGTH BY MODE OF TRANSPORTATION July 2009 - June 2010



Values are shown for Overall trip length

The average trip length by mode split shows that employee trips on all accounts are longer than student trips. However, employees' longest commuting trips are taken using an alternative mode, not SOV's. The longest of these trips using alternative modes are vanpools (30.7 miles) and trips not taken (CWW's - 17.9 miles, and Telecommuting - 20.3 miles). This indicates that those commuters who live farthest from work are more likely to use these alternative mode types as their commuting method.

## HOW LONG DOES THE COMMUTE TAKE?



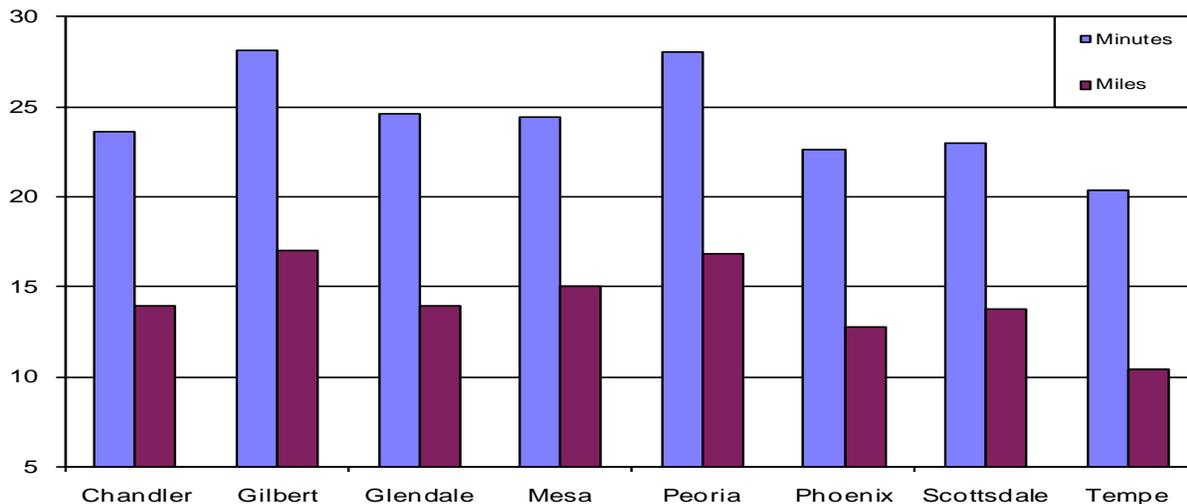
Typically, TRP participants can expect to spend an average of 25.5 minutes commuting to work or school. Students take an average of 17.7 minutes to get to school, while employees average 25.7 minutes to get to their worksite.

Approximately 54% of all commuters take less than 20 minutes to arrive at work/school. The largest group of all respondents is represented by those who take between 11 and 15 minutes to commute, while 34.9% of commuters take 30 minutes or more to get to their worksite.

For students, 65% commute to school in 15 minutes or less. Over 25% of all employees take more than 30 minutes to arrive at their workplace.

# VALLEY COMMUTING PATTERNS

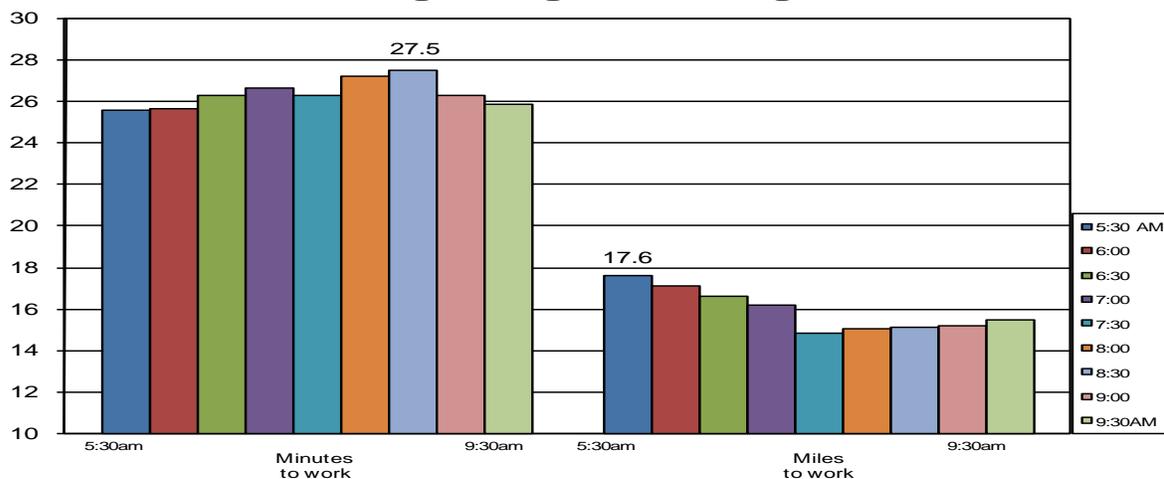
## Commuting within the Valley



Of the eight largest municipalities in the Valley, the time and distance spent commuting to work can vary depending upon where one lives. For all communities, the time spent commuting correlates to the distance traveled to work.

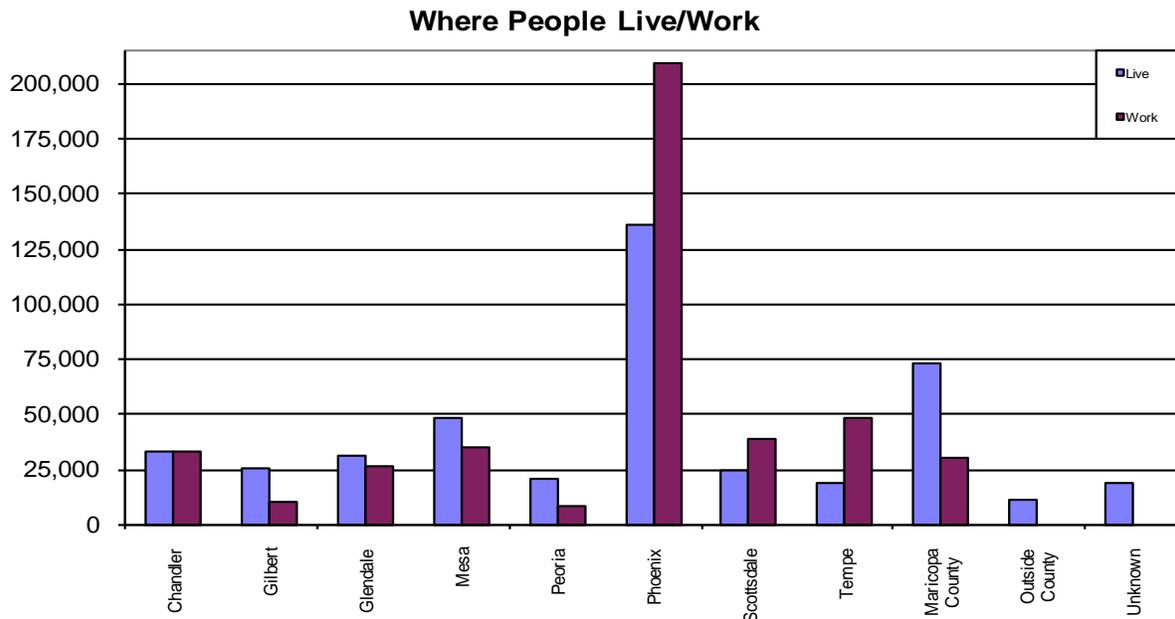
The two Valley communities that have the longest commute in minutes and miles are Peoria and Gilbert. This may be that these commuters must travel outside of their area of residence to get to their worksite. For nearly all these major cities, TRP participants found that their distance traveled and time spent commuting increased from last year.

## Commuting During the Morning Rush



For Valley commuters, the morning rush is worse during the later portion of the commute. The average morning commute takes about 27.5 minutes and is 17.6 miles long, both increased from last year. A TRP commuter may experience, nearly a 28-minute drive if they begin work at 8:30 a.m., even though it is one of the shorter commute trips. It is also noted that those who have longer commutes depart for work earlier in the morning.

## WHERE TRP EMPLOYEES LIVE COMPARED TO WHERE THEY WORK



During FY10, 441,055 employees responded to the survey indicating their city of residence. For the purposes of this report, only those cities whose residents total 19,000 or more employees in the TRP for the year are listed.

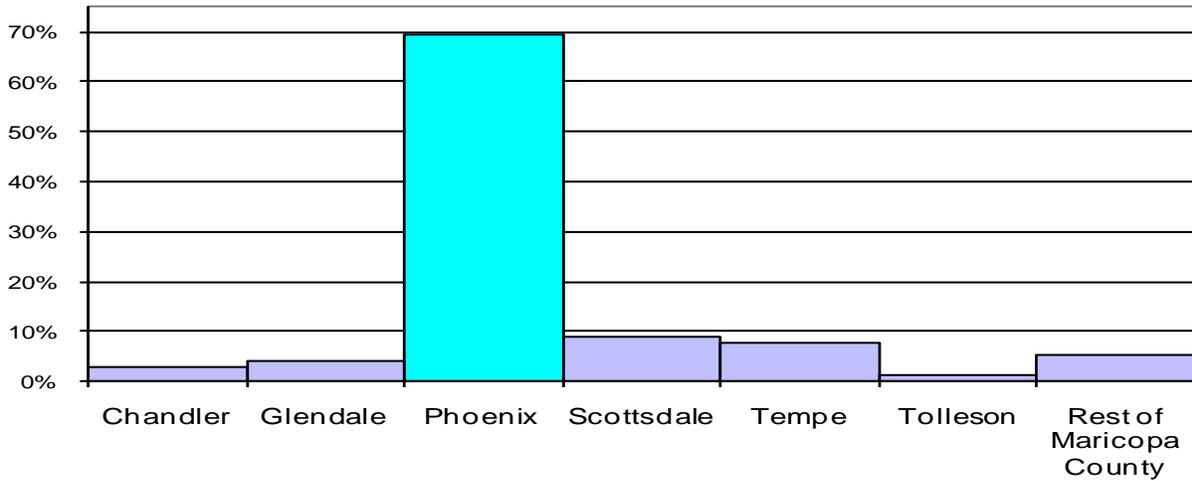
As expected, the City of Phoenix is the largest contributor in both residents and number of employees in the workforce. While 135,668 residents live in Phoenix, 209,514 work within the city limits. Other cities that have a positive employee/resident ratio (more employees working in an area than live in that area) are Scottsdale and Tempe. This trend indicates that these cities have to accommodate more commuters coming into their communities during the rush hours. Additional scheduling of alternative modes of transportation will be needed in order to reduce traffic congestion associated with commuters getting to their worksite.

Conversely, all other major cities in the area have a negative employee/resident ratio. These communities also face the task of commuters returning to their residences. The Town of Gilbert shows true characteristics of a 'bedroom community'; while there are 25,921 residents in Gilbert who participate in the TRP, only 10,545 TRP participants work in Gilbert.

The following charts show two completely different examples of demographic trends here in the Valley. The city of Phoenix represents the typically large metropolitan area with major employers within the city limits, while the Town of Gilbert shows signs of being the suburban enclave where commuters live, but work in surrounding cities.

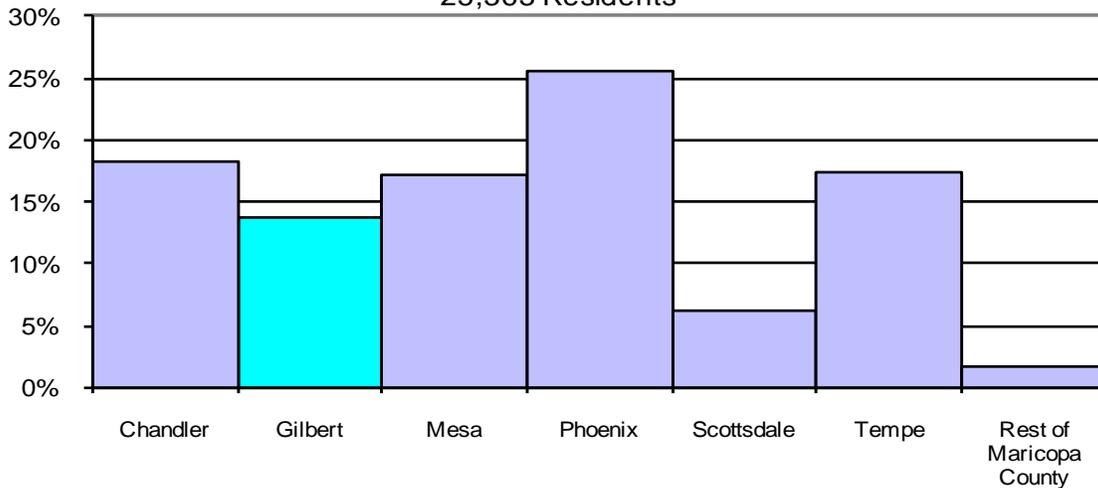
Of all Phoenix residents in the TRP, 69% (90,813) live and work within the city limits. Approximately 25% of all other Phoenicians work in adjoining major cities. While the rest of the city's residents work throughout the County, representing only 5.4% of Phoenix TRP residents.

**Where Phoenix Residents Work**  
130,846 Residents

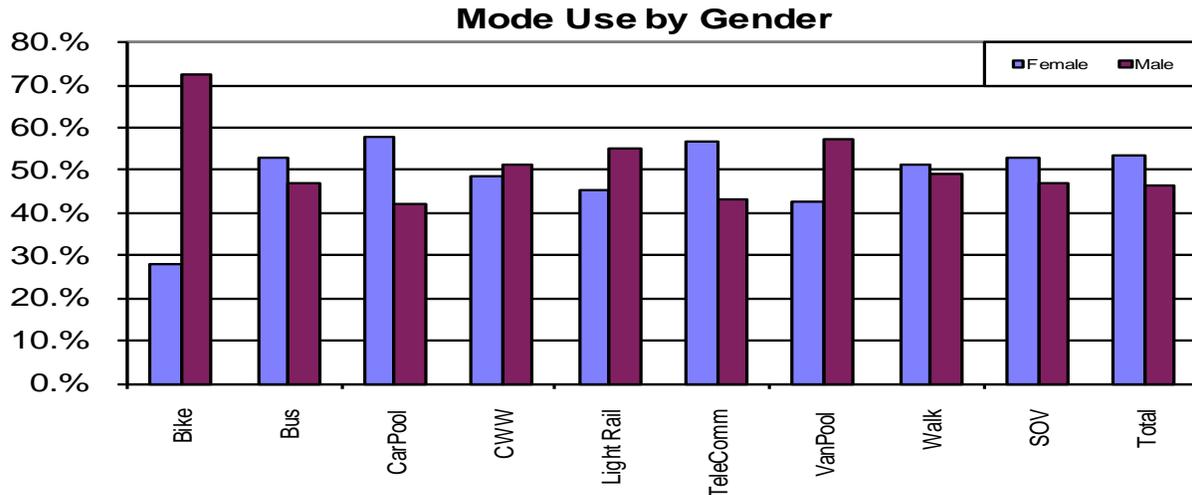


Representing the other side of commuter travel, the majority of the Town of Gilbert residents work in other cities in the Valley; over 86% work outside of Gilbert. Only 13.7% of the TRP participants (3,469) who live in Gilbert also work within the city limits. This indicates that Gilbert residents who participate in the TRP continue to seek work outside of the Town, resulting in a true bedroom community. Comparatively, for the other major cities in Maricopa County, the average percentage of residents who live and work in the same city is approximately 35% for TRP participants. The Town of Gilbert is substantially below the average for other major cities in Maricopa County.

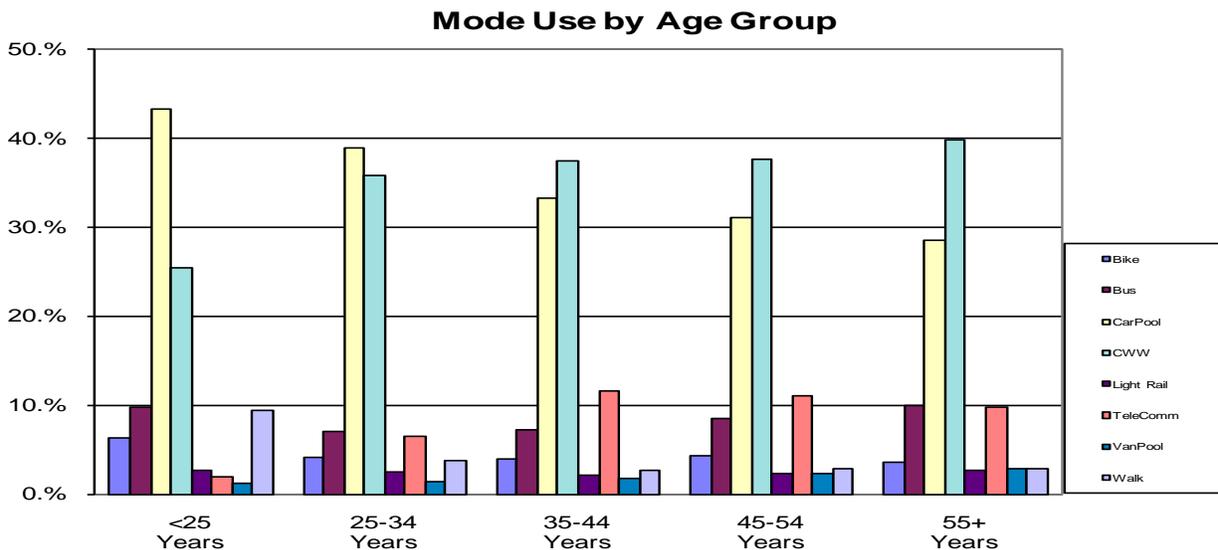
**Where Gilbert Residents Work**  
25,363 Residents



## DEMOGRAPHIC DATA



For this year, over 405,000 TRP participants answered the optional question on gender. Females account for 53.4% of the total responses. While women show a higher percentage than men do of carpooling and tele-commuting, men are more likely to use a light rail, compressed work week and vanpool. The greatest disparity is represented by bicyclists. Men are more likely to bike to work than women, by a 3:1 ratio.



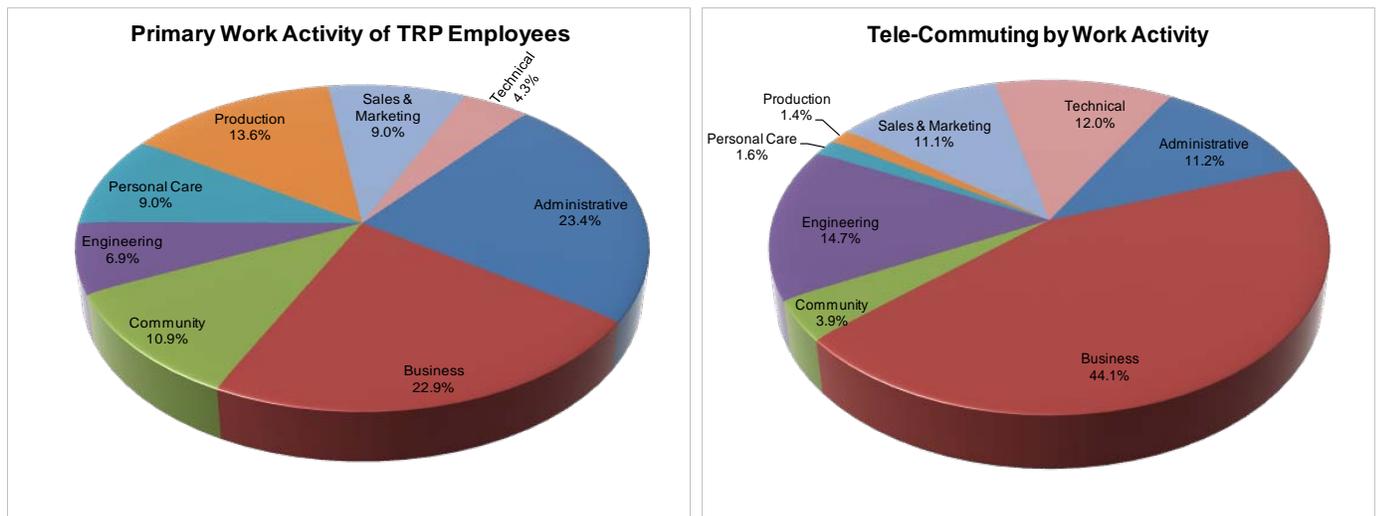
For those who responded to the optional question on age, the older the age group in TRP, the more likely the commuter will use telecommuting and compressed work week (CWW) to get to their worksite. The younger age groups are more apt to use biking and walking when traveling to work. The <25 year old group is more likely to use a bike, carpool or walk than any other group and are the least likely to use telecommuting as an alternative mode by a greater disparity. The 35-44 year old group telecommutes more often than other groups. The 55+ year-old group uses bus, CWW, light rail or vanpools more than any other group.

## WORK ACTIVITY FOR TRP PARTICIPANTS

The TRP revised the questionnaire survey form this year and added a question regarding the work activity of employees. The question asks the following: **“What best describes your primary work activity?”**

For an overall analysis of work activities by TRP employees, the chart on the left shows how commuters identify themselves in their jobs. Generally speaking, the largest number of respondents falls into the category of ‘Administrative’; over 23% of employees claim they perform some type of administrative function daily.

In order to give a contrast of what type of work activity an employee does and what type of alternative mode they may use, a side by side comparison is shown below. To limit charts and graphs, only one example of an alternative mode is shown, tele-commuting. Comparatively, 11.7% of all tele-commuters work an administrative job. This comparison makes perfect sense. Those in ‘Production’ and ‘Personal Care’ are less likely to have the opportunity to tele-commute, because their type of job does not allow for them to work from home.



For brevity’s sake, all work activities are abbreviated on the pie charts. A more detailed listing of each work activity is described below. The work activities were chosen based upon demographic modeling tracked by the Maricopa Association of Governments (MAG).

Administrative	Administrative/Clerical/Retail
Business	Business/Financial/Professional
Community	Community Support/Teaching
Engineering	Engineering/Research/Design
Personal Care	Personal Care & Services
Production	Production/Construction/Transport
Sales & Marketing	Sales & Marketing
Technical	Technical Support

## CONCLUSION

In FY10, the TRP is currently in its twenty-first year. Analysis of the TRP data shows that the employees/students participating in the TRP continue to be strong supporters of using alternative modes of transportation in order to get to work or school. Although the TRP has consistently shown an increase in the number of trips saved and pounds of pollution saved each year, this year the recalculating of methodology for the alternative fuel vehicle modes from survey response increased the trips and pounds for pollution saved.

A number of changes in methodology used to collect and calculate commuter miles, trips, modes and pollution saved impact this reporting period. The reporting outcome was affected by one or more of the following reasons: 1) Credits for Alternative Fuel Vehicle (AFV) use were calculated for trips or miles driven. Full or partial credit was given to electric, hybrid, hydrogen and natural gas vehicles, as calculated with assistance of MAG and the EPA. Calculations were reviewed and approved by the Trip Reduction Task Force; and 2) other external factors impacted commuter driving patterns, such as: a) the calculation factors used to determine how many miles are driven to produce one-pound of pollution. The regional miles/pound factor increased from 45.5 to 45.8, and b) a reduction of workforce commuters due to the downturn in the economy for some employers.

Alternative mode users in the TRP continue to support the program by showing a substantial amount of miles driven weekly in order to reduce Valley pollution. **The total amount saved this year was 27.1 million miles weekly for alternative mode commuters.** Carpool and vanpool users accounted for 56.9% of those miles saved. The miles saved by TRP commuters resulted in 15,403 tons of pollution not being produced. Even though commuting distances and time traveled to the worksite have increased this year, TRP participants continue to make environmentally sound decisions by choosing to use an alternative mode in order to lessen their SOV trips.

The employees who participate in the program continue their support of the TRP as shown by a high survey response rate, 76.71%. **Employee's contribution to the amount of pollution saved annually accounted for 86.3% in the TRP.** The e-survey continued to be a successful format for TRP employers to survey their employees. The number of companies using the e-survey this year increased from 164 to 199.

The **miles saved by alternative mode use for students was 2,018 tons of pollution annually.** Since new high school students enter the TRP annually, RPTA's efforts to educate students on the program's environmental benefits represent an ongoing training opportunity. Educating students on the use of alternative modes to commute will only increase the probability that once the students are out in the workplace they will continue with their learned environmental commuting practices.

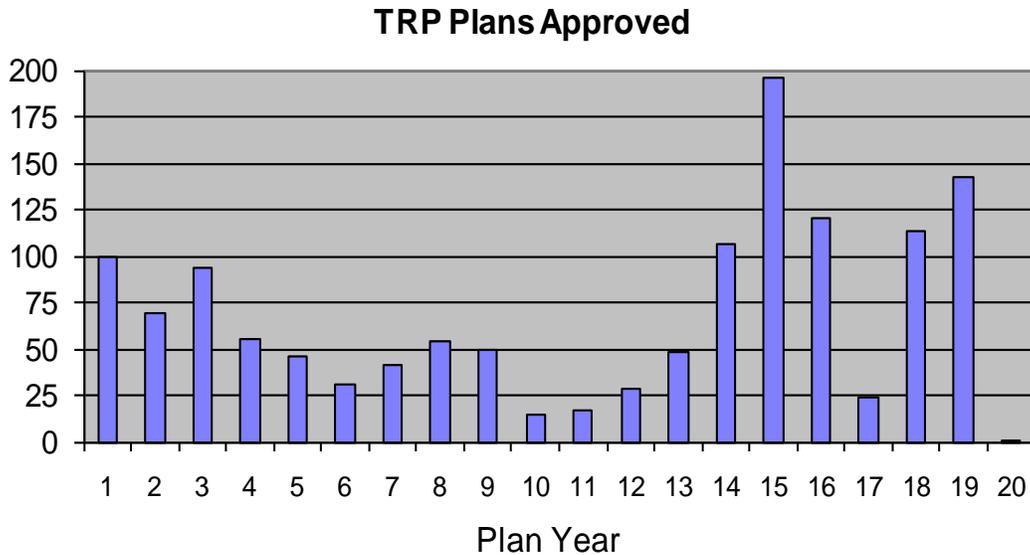
### **Future Goals:**

- Create a student questionnaire version of the e-survey; have at least 15% of TRP students use the electronic survey within the first year of implementation.
- Continue to increase the number of TRP companies that use the e-survey, so that the majority of their employees use the electronic version.

## TRIP REDUCTION PLANS

During Fiscal Year 2009-2010, the County received 1,271 plans and presented 1,224 plans to the Task Force for review and approval. Of those approved by the Task Force 75 of them were first year plans.

The instruction package sent to participating organizations consists of a blank plan format and an example plan, which are included in this section.



## MONITORING

The monitoring program was developed to review the trip reduction measures addressed in an employer's plan. The TRP staff conducts a substantial amount of monitoring through written and verbal channels, focusing on companies that are approaching survey dates. Additionally, employers that do not achieve targeted reductions or are suspected of not implementing all approved strategies are the primary candidates for on-site visits. During this year, 440 monitoring calls were made and 873 onsite visits were conducted. These calls and visits resulted in 576 requests for documentation.

## ENFORCEMENT

Enforcement ensures that any company participating in the TRP shall maintain compliance with the requirements of the TRP statutes. Enforcement activities occurring during FY10 are as follows:

- Staff issued 88 Notices of Violation (NOV) informing companies of non-compliance to the TRP (i.e. late plan or documentation).
- No civil penalties were levied in FY10.