



**TOP 10
LITTER
HOT SPOTS**

April 2007





Overview of the Litter Situation in Maricopa County



The Valley's population continues to grow at a rapid pace and the need for new transportation corridors has grown tremendously. Since 2000, the number of lane miles on the Regional Freeway System has increased substantially, adding 350 lane miles to the freeway maintenance program. The increase in lane miles and the higher volume of people traveling on Valley freeways make it extremely challenging for maintenance crews to keep pace with the increasing amount of litter.

Funding to support litter control efforts in Maricopa County was augmented in November 2004 with voter approval of Proposition 400, which extended the half-cent sales tax for transportation. In developing the Regional Transportation Plan that served as the basis for Proposition 400, the Maricopa Association of Governments (MAG) included \$279 million in funding to support litter pickup, sweeping, landscape maintenance and litter education efforts for the regional freeway system over the 20-year life of the Plan. This has led to an increase of about \$3.9 million a year (from \$5.5 million to \$9.4 million) to spend on litter control and landscape maintenance in our region.

As a result of the additional funding, the Arizona Department of Transportation (ADOT) has increased the frequency of litter pickups and landscape maintenance along freeways in the MAG region. Among the enhancements:



Litter:

- Increased number of pickup crews from 4 to 18.
- Increased number of bags picked up along Valley freeways from 85,594 to 143,779 in 2006 (current average puts ADOT on track for more than 151,000 bags in 2007).
- Decreased litter complaints significantly to only a few per month.



Landscaping:

- Increased number of landscaping crews from 4 on-call crews to 16 on-call crews.
- Moved from an initial three tree trimming crews to 5 on-call crews covering 60 miles of freeway.
- Conducted full-scale landscaping on 19 miles of freeway.
- Removed debris/trash uncovered during trimming operations.



Sweeping:

- Added frequency to existing 240 curb miles.
- Extra sweeps continue for PM-10 (particulate matter 10 microns in diameter or less) compliance in urban core.





ADOT facilitates regularly scheduled litter pickup, including weekly litter pickup in urban and suburban areas. Currently, there are 18 active crews with the option of hiring additional crews to meet needs. On any given day, two crews are ready for same-day response to alleviate litter accumulation at “litter hot spots.” All of the crews work closely with inspectors; recently three additional inspectors were added to support the overall cleanup effort. ADOT also has established a new maintenance subprogram to monitor the use of Proposition 400 funds and track the performance of the program. ADOT continues to work on cost-effective solutions to the litter problem.

Top 10 Litter Hot Spots



Despite enhanced cleanup efforts, roadway litter continues to be of significant concern in every area of the Valley. To help monitor the worst areas of litter accumulation, ADOT crews track the number of bags per mile of litter collected. The “Top 10 Litter Hot Spots” list was created as a tool to assess the “litter landscape” in Maricopa County and to graphically illustrate to motorists the results of littering.

The following table identifies the Top 10 Litter Hot Spots as indicated by the number of bags collected per mile along each segment over a ten-month period from March 6 to December 6, 2006, with the No. 1 hot spot indicating the section where the most number of bags were collected. It is important to note that this hot spots list references a specific period of time and could change in the future as a result of targeted litter control efforts.

Route	Freeway Name	Segment (From—To)	Length	Bags/mile	Labor Hours	Cost
I-10	Maricopa	SR51—40th St	5 mi.	761	3805	\$66,370
I-10	Papago	101L Agua Fria—I-17 Black Canyon	9 mi.	752	7850	\$139,507
I-10	Papago	303L Estrella—101L Agua Fria	9 mi.	720	6867	\$121,730
I-17	Black Canyon	I-10 Maricopa—I-10 Papago	6 mi.	714	5151	\$90,964
I-10	Papago	I-17 Black Canyon—SR51	5 mi.	661	4436	\$79,172
I-10	Maricopa	40th Street—Baseline Rd	4 mi.	593	1762	\$31,918
Loop 101	Pima	Princess Dr.—202L Red Mountain	15 mi.	548	6754	\$119,418
Loop 202	Red Mountain	I-10/SR51 TI—101L Price	10 mi.	521	6322	\$111,046
Loop 101	Agua Fria	Grand Ave—I-17 Black Canyon	12 mi.	518	5539	\$97,798
US 60	Superstition	I-10 Maricopa—SR87	7 mi.	517	3387	\$60,366

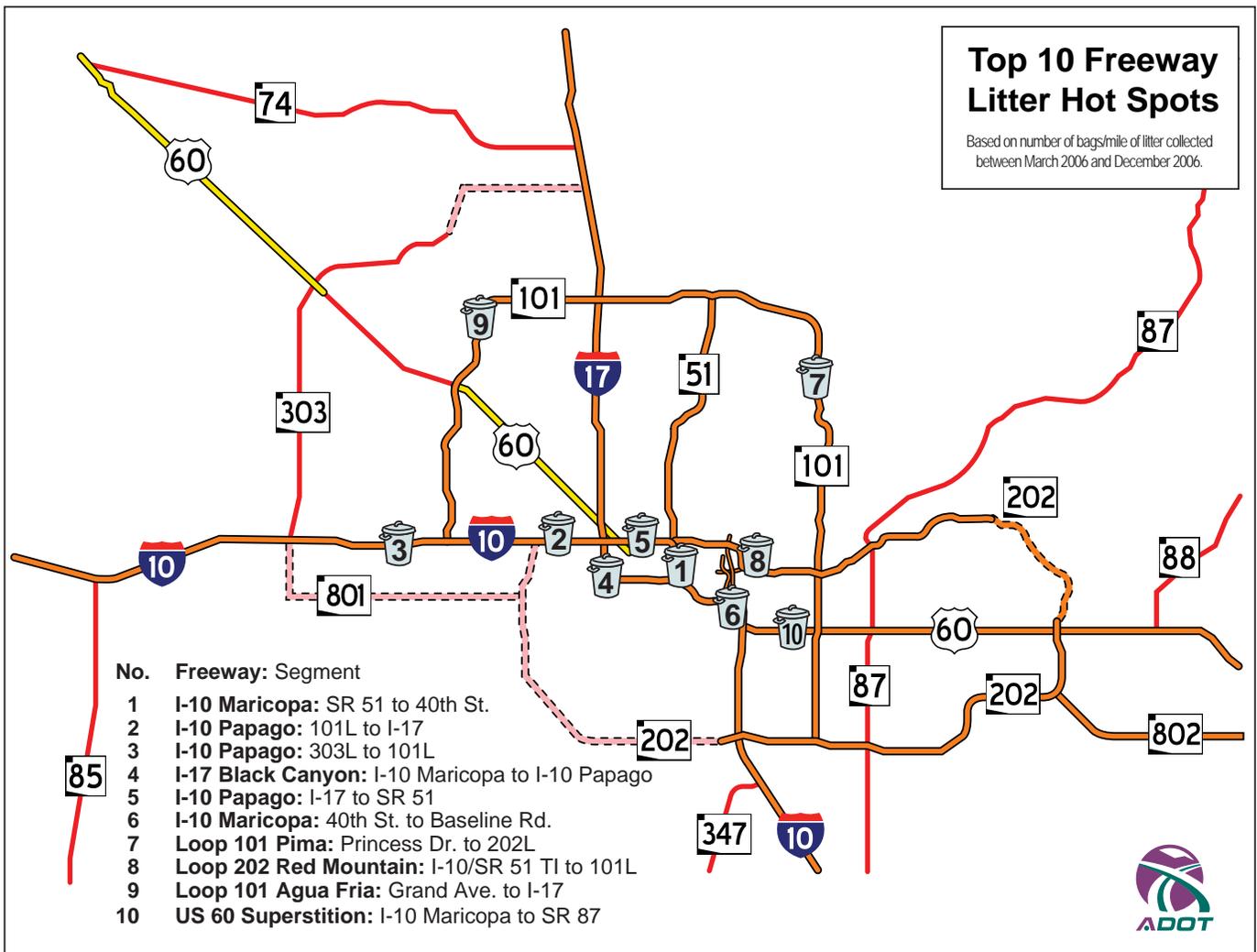




According to this initial assessment, a number of Valley freeways had heavy accumulations of litter along specific segments, including Interstate 10, the Loop 101 (Agua Fria and Pima sections), Interstate 17, Loop 202 (Red Mountain Freeway) and US 60. Not surprisingly, the longest freeways had the most number of hot spots. I-10 in the MAG area is 57 miles; Loop 101 is 61 miles, and I-17 is 38 miles.

There is a “Top 10 Litter Hot Spot” in every part of the region. The hot spot segments vary in length of miles, bags collected per mile, labor hours and costs. Following are details for each of the Top 10 Litter Hot Spots grouped by subarea. A map indicating the hot spot locations is shown below.

Top 10 Litter Hot Spots Map



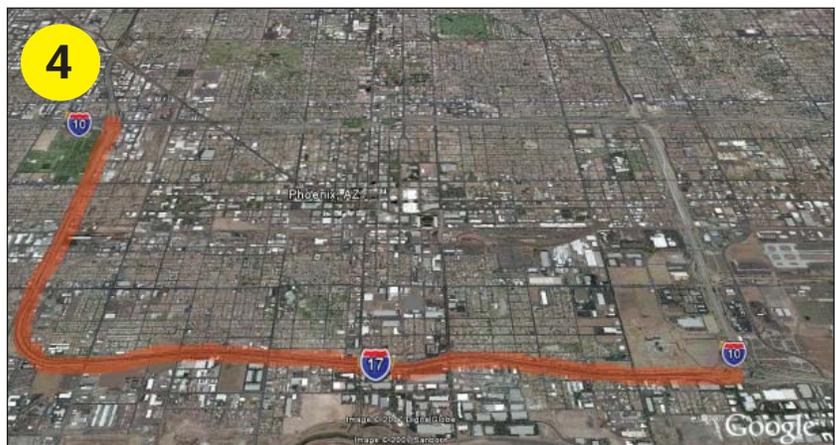
Central Valley

Littering from vehicles tends to take place when motorists are traveling at reduced traffic speeds, and therefore is most often found in congested areas. The Central Valley, which encompasses the most densely populated areas of the Valley, contains six of the Top 10 Litter Hot Spots, including those ranked 1st, 2nd, 4th, 5th, 6th, and 8th.

The section ranked **1st**, (or worst), is a 5-mile segment that runs along the I-10 Maricopa Freeway from State Route (SR) 51 to 40th St. It cost \$66,370 and 3,805 labor hours to clean up the area, resulting in 761 bags of litter per mile.

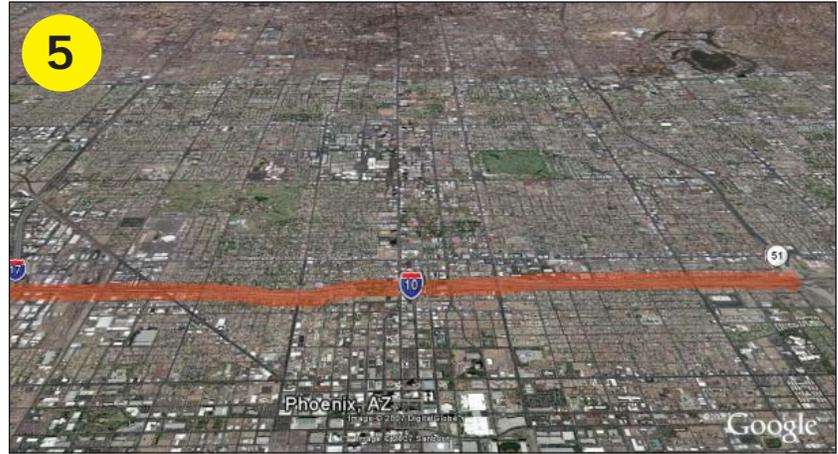
The section ranked **2nd** runs along I-10 (Papago Freeway) from Loop 101 (Agua Fria) to the I-17 (Black Canyon) Freeway. It cost \$139,507 and 7,850 labor hours to remove litter from that 9-mile section, resulting in 752 bags per mile.

The 6-mile section ranked **4th** runs along the I-17 (Black Canyon) Freeway from I-10 Maricopa Freeway to I-10 Papago. It cost \$90,964 to clean up the area, which resulted in 714 bags of litter per mile and 5,151 labor hours.



Central Valley (continued)

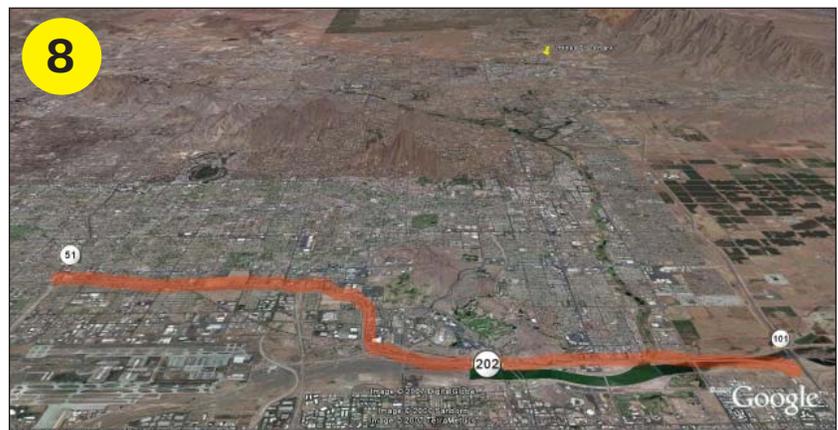
The 5-mile section ranked **5th** runs along the I-10 Papago Freeway from I-17 to SR 51. It cost \$79,172 and 4,436 labor hours to clean up the area, resulting in 661 bags of litter per mile.



The 4-mile section ranked **6th** runs along the I-10 Maricopa Freeway from 40th St. to Baseline Rd. It cost \$31,918 and 1,762 labor hours for litter removal, resulting in 593 bags of litter per mile.



The 10-mile section ranked **8th** runs along the Loop 202 Red Mountain Freeway from the traffic interchange at I-10/SR 51 the Loop 101 Price Freeway. It cost \$111,046 and 6,322 labor hours to clean up the area, resulting in 521 bags of litter per mile.



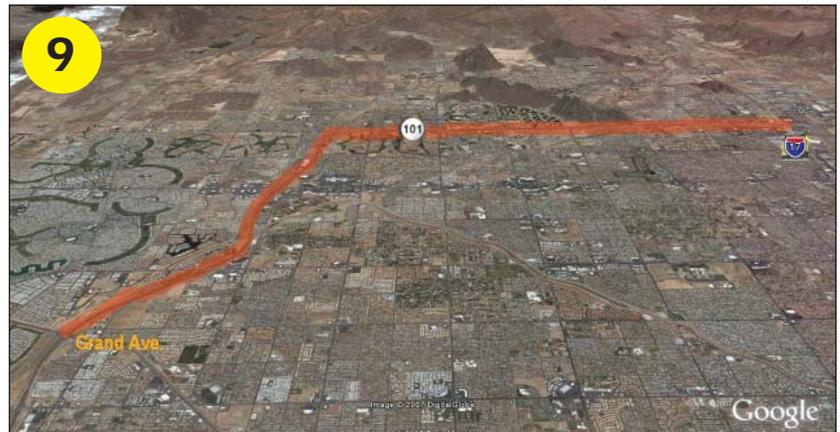
West Valley

The West Valley contained two litter hot spots, including one of the worst at No. 3 and the No. 9 hot spot.

The segment ranking **3rd** worst on the list runs along the I-10 Papago Freeway from Loop 303 (Estrella Freeway) to Loop 101 (Agua Fria Freeway). It cost \$121,730 and 6,867 labor hours to clean up the 5-mile segment, which resulted in 720 bags of litter per mile.



The 12-mile segment ranking **9th** on the litter list runs along Loop 101 (Agua Fria Freeway) from Grand Avenue to I-17. It cost \$97,798 and 5,539 labor hours to clean up the area, resulting in 518 bags of litter per mile.



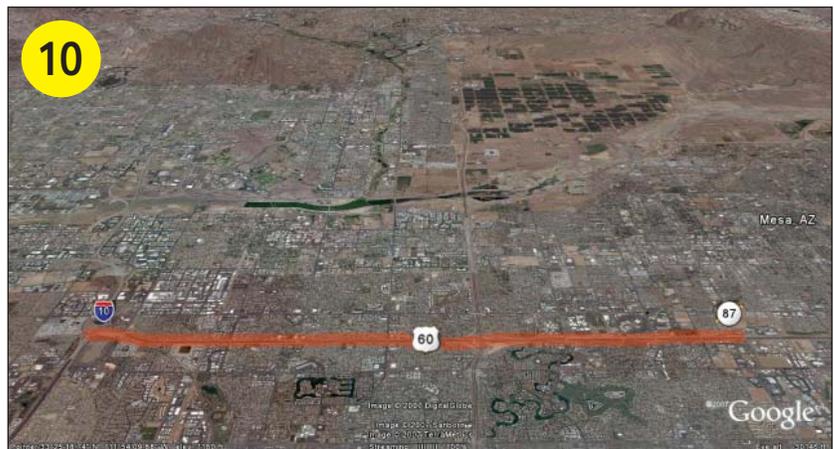
East Valley

This area includes Top 10 Litter Hot Spots ranked 7th and 10th.

At 15 miles, the **7th** hot spot is the longest section of freeway included in this report, running along Loop 101 (Pima Freeway) from Princess Dr. to Loop 202 (Red Mountain Freeway). It cost \$119,418 and 6,754 labor hours to clean up the area, resulting in 548 bags of litter per mile.



The 7-mile section ranked **10th** runs along the US 60 Superstition Freeway from I-10 Maricopa to SR 87. It cost \$60,366 and 3,387 labor hours to remove litter from the area, resulting in 517 bags of litter per mile.





Litter Costs Us in a Variety of Ways

Each year, it costs our region about \$3 million and nearly 150,000 labor hours to pick up litter along Valley freeways. With the funding made available through the MAG Regional Transportation Plan, about 151,000 bags of trash are picked up every year along our regional freeway system.

ADOT has calculated that an average bag of trash weighs 10.635 lbs. Since the addition of the Proposition 400 funds in March of 2006, the program is averaging 12,647 bags a month, or 134,501 lbs. (67.25 tons) a month.

Unsightly litter also impacts our economy when tourists and prospective businesses choose not to come back to our state due to a poor impression.

Top 10 “Time Taxers”

Below is a list of the most common large debris items that fall from vehicles into the roadway, creating serious safety hazards and also contributing significantly to traffic congestion and travel delay.

1. **Tire alligators**
2. **Mattresses**
3. **Ladders**
4. **Couch and chair cushions**
5. **Bed liners**
6. **Appliances**
7. **Camper shells**
8. **Carpet**
9. **Plastic patio chairs**
10. **Ducting (sheet metal and insulated duct work)**

The Litter “Time Tax”

In the same way that freeway litter creates a burden on public resources, it also causes a private burden on residents by creating traffic delays.

Litter in the beds of pickup trucks that is not secured can blow out and cause unintentional littering. Usually this type of litter is blown along the sides of the freeway.

A more dangerous type of unintentional littering can occur with larger loads that are not secured properly. Items such ladders, mattresses, furniture, landscaping and construction debris can fall into freeway traffic lanes. Debris on roadways nationwide causes 25,000 accidents each year and more than 80 fatalities. It also slows traffic and acts as a “tax” on our time—costing us in time, wasted fuel and lost productivity.

We have dubbed this type of debris as “time taxers.” The list to the left shows the Top 10 Time Taxers in terms of the most common forms of roadway debris.



Summary



Solving the litter problem along Valley freeways requires support at the local, state and regional levels, but it also requires support at the personal level. Until motorists take pride in Arizona and change their behavior, we will continue to deal with unsightly litter that degrades the beauty of our state and our regional quality of life.

The good news is that we can eliminate freeway litter hot spots. Easy solutions for motorists are to use a litterbag in their vehicle, refrain from tossing any items out the window, and making sure vehicle loads are properly secured with tarps and tie downs. You can also report littering through the Don't Trash Arizona Web site at www.DontTrashAZ.com, or through the Arizona Clean and Beautiful hotline toll free at **1-877-3LITTER (354-8837)**.



