



Options for Improving Compliance with Vehicle Registration Laws

FINAL REPORT 549

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16. Abstract <p>Vehicle registration taxes in Arizona are higher than most states due to a state-imposed Vehicle License Tax that is charged in lieu of further personal income or property taxes. Although this seems to be a more equitable system, the result is a large number of Arizona residents who choose to illegally register their vehicles out-of-state. The effect of these violations on Arizona is a loss of millions of dollars in the form of fewer registration taxes collected. While Arizona has an enforcement program currently functioning to combat the problem, improvements need to be considered to optimize the recovery of lost registration taxes.</p> <p>The purpose of this report is to analyze the loss to Arizona due to vehicle registration violations, to analyze the effectiveness of the current enforcement program, and to determine what additional steps can be taken to reduce the number of violations. A number of enforcement programs are being utilized nationwide. However, cost constraints and current legislation hinder the efforts of Arizona's enforcement program. While improvements can be made to current practices, they must be implemented in a cost-effective manner in order to provide incentive for the State to invest in the changes.</p>					
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Glossary of Acronyms

ADOT	Arizona Department of Transportation
ARS	Arizona Revised Statutes
DMV	Department of Motor Vehicles
EVR	Electronic Vehicle Registration
MSRP	Manufacturer's Suggested Retail Price
MVD	Motor Vehicle Division
RFID	Radio Frequency Identification
VLT	Vehicle License Tax

EXECUTIVE SUMMARY

The state of Arizona is currently facing a major dilemma related to the proper registration of motor vehicles within the state. In the typical case of registration noncompliance, an individual moves into the state of Arizona; he brings his vehicle, which is properly registered in his former state, with him to Arizona. Based on the Revised Statutes of Arizona pertaining to vehicle registration, the individual must immediately register his vehicle. Despite this, many people do not comply since they have valid registration documentation from their state of origin. This failure to register the vehicle in accordance with Arizona law causes several problems for the State of Arizona; everything from lost registration revenue, inaccurate road usage forecasting, and environmental impact assessments are affected by this violation.

Although the impacts to the state are many and diverse, the cause of the problem is simple, and can be reduced to the common denominator of economics. In Arizona, a Vehicle License Tax (VLT) is assessed by the state based primarily on the value of the registered vehicle. This tax is assessed in addition to the other registration fees charged by the state and in lieu of alternate personal income and property taxes charged by other states. While this tax varies significantly based on the age and original value of the vehicle, it represents a significant increase in the cost of registration in Arizona. Using a Ford Expedition as an example, the price difference was roughly \$690 per year compared to the lowest cost states, and more than \$500 compared to the next most expensive state. While the Arizona system is arguably the most equitable, placing the financial burden for driving on those who drive and weighting that burden to those who choose to drive luxury vehicles, it raises problems due to the ease and benefit of noncompliance. An individual who moves to Arizona with a vehicle registered in a different state reaps the benefits of Arizona's favorable tax structure, while simultaneously taking the benefit of another state's lower registration cost. This creates both a real and perceived economic advantage for the violator.

Currently in Arizona, there is not a large-scale systematic method for locating violators of these statutes. Rather, the Motor Vehicle Division employs a small team to investigate cases of registration violation. This group has received over ten thousand cases to follow up in periods under six months. Due to the massive size of this caseload and the labor-intensive nature of investigations, most cases are not closed. In a large portion of the cases, letters are sent to the suspected violators informing them of the obligation to register their vehicles in Arizona. The hope is that this will encourage them to voluntarily comply.

Many possible solutions to this problem have been suggested and tried over the years. The issue with many of these proposals is the data needed to carry them out are either not available or not economical to obtain, or would require an increase in the tax rates of the state. With these restrictions in place, many options for enforcement are not viable. In light of this, Arizona will need to increase the magnitude of current enforcement efforts in order to optimize compliance with current laws.

I. PROBLEM ASSESSMENT

A. VEHICLE REGISTRATION PROBLEMS

To maintain roads and highways, the Arizona Department of Transportation (ADOT) depends on fees and taxes paid by highway users. This study focuses on registration fee and Vehicle License Tax (VLT) revenue from Arizona residents who operate motor vehicles or trailers. Arizona vehicle registration fees and the VLT are used to maintain and improve highways in Arizona through the Highway User Revenue Fund. Problems occurring within the Arizona vehicle registration process include Arizona residents with out-of-state plates and urban residents evading the vehicle emissions inspection requirement by registering vehicles to addresses outside the non-attainment region.¹ Existing literature regarding these issues is limited, due to the difficulty in quantifying the problems.

Noncompliance with laws can result from many possible circumstances. Urban residents may choose to register their vehicles to an address outside the non-attainment region illegally in order to avoid emissions inspection requirements. This issue is not financially significant to Arizona since the only difference in registration cost between urban and rural residents comes from the \$0.25 Air Quality Compliance fee paid by urban residents. Despite the light financial loss due to these illegal registrations, there are potentially serious consequences due to noncompliance with emissions laws. One problem that can result from improper in-state registrations is increased pollution due to failure to meet emissions requirements of a vehicle registered in a rural area, but primarily used in an urban environment.

Regarding the issue of vehicles owned by persons moving to Arizona, many new residents are simply not aware of the law requiring immediate registration. Most states offer a grace period for vehicle registration. Arizona and Michigan are the only states that do not allow a grace period, while the grace period in Wisconsin is two days. The other 47 states allow 10 to 180 days, with 26 states allowing 30 days (Appendix I). The average over all 50 states is approximately 44 days. Considering the variance between states, persons moving out of state who makes the assumption that the grace period in each state is the same could soon find themselves in violation of the law. For example, a person moving to Arizona from New Mexico would be required by Arizona law to replace his registration immediately, while a person moving from Arizona to New Mexico would have nearly six months to replace his Arizona registration.

B. NATIONAL REGISTRATION COSTS

In addition to the variance in grace periods for new residents to register their vehicles, people moving across state lines are likely to encounter varied registration costs. Vehicle registration costs and fees vary by state and in some cases by county. Table 1

¹ A non-attainment region is a geographic area with an unacceptable level of one or more specified air pollutants.

demonstrates the variation in registration costs by location. To develop an easily read table, a 2000 model year Chevrolet Cavalier LS 4 Door sedan was used as an example.

According to the manufacturer the original manufacturer's suggested retail price (MSRP) for this vehicle was \$13,745 excluding applicable sales tax and other fees. The market price for the vehicle as of October 26, 2002 was \$7,960, according to a *Kelly Blue Book* rating of a vehicle in "Excellent" condition with 25,000 miles posted on the odometer. This is a four-door passenger sedan with a 2.2L engine developing 140 horsepower as measured at the engine and a curb weight of 2,678lbs. [1]

Table 1. Year 2003 Registration Costs for Model Year 2000 Chevrolet Cavalier

Vehicle Registration Costs by State					
Rank	State	Cost	Rank	State	Cost
1	Minnesota	\$ 189.00	26	Virginia	\$ 30.50
2	California*	\$ 188.20	27	Washington	\$ 30.00
3	Arizona*	\$ 176.67	28	West Virginia	\$ 30.00
4	Utah	\$ 150.00	29	New Hampshire*	\$ 25.20
5	Iowa	\$ 141.00	30	Maine	\$ 25.00
6	Illinois	\$ 78.00	31	North Carolina	\$ 25.00
7	Alaska	\$ 68.00	32	Alabama	\$ 24.25
8	Rhode Island	\$ 66.00	33	Missouri*	\$ 24.25
9	North Dakota	\$ 59.00	34	South Carolina	\$ 24.00
10	Michigan	\$ 54.00	35	Oklahoma	\$ 22.75
11	Vermont	\$ 50.00	36	Indiana	\$ 20.75
12	New Jersey	\$ 49.00	37	Delaware	\$ 20.00
13	Montana	\$ 48.75	38	Georgia	\$ 20.00
14	New Mexico	\$ 46.00	39	New York	\$ 17.50
15	Connecticut	\$ 45.00	40	Arkansas*	\$ 16.00
16	Wisconsin	\$ 45.00	41	Hawaii	\$ 16.00
17	Ohio	\$ 42.75	42	Kentucky	\$ 15.00
18	South Dakota	\$ 42.00	43	Oregon	\$ 15.00
19	Maryland	\$ 38.00	44	Mississippi	\$ 10.00
20	Massachusetts	\$ 36.00	N/A	Colorado	Variable Depending on County
21	Pennsylvania	\$ 36.00	N/A	Kansas	Variable Depending on County
22	Florida	\$ 35.60	N/A	Nebraska	Variable Depending on County
23	Idaho	\$ 35.00	N/A	Texas	Variable Depending on County
24	Nevada	\$ 33.00	N/A	Wyoming	Variable Depending on County
25	Tennessee	\$ 32.00	N/A	Louisiana	Unavailable

*Registration costs based on a 2000 Chevrolet Cavalier Sedan 4D: 4-Cyl. 2.2 Liter Front Wheel Drive with 25,000 miles weighing 2676 lbs. Private Party Value \$7,960

Note: Some states publish a small range for vehicle registration costs. Example - North Carolina costs \$20 to \$25. In these cases, the upper end of the range was used.

States in which there was a material difference in cost between counties were not included in this list in order to ensure the data are comparable. Unlike Arizona, several states allow each county to determine their own registration costs, rather than having a uniform cost across the state. Because Arizona and most other states have a single registration cost for every county, this cost must include all necessary charges to collect desired fees statewide. Separate county fees, however, enable states to determine registration fees based on factors such as cost of road maintenance in the region. A single comparable registration cost cannot be determined from the information provided by these states. Additionally, information could not be obtained from Louisiana due to administrative and system changes taking place.

Of the states on the list only Arizona and California include the vehicle use tax with the registration fee. Were these fees to be separated as in the other states, California

would move into the number 30 position with a \$29.00 fee and Arizona would take the number 44 spot with its \$9.50 combined registration and air quality research fee. Although it may seem that California and Arizona are charging residents far more than other states through vehicle use or VLT, some states have what amounts to a hidden registration fee, or make up the lost revenue through higher state income, property, or other taxes. While Arizona's use of an up-front VLT allows the public to see what they are paying for, it also leads to the perception that Arizona tax rates are higher than those of other states.

From Table 1 it is apparent that Arizona is one of the more expensive states for fees directly associated with vehicle registration. However, the magnitude of the difference becomes even more apparent as the vehicle value increases. Table 2 below shows the adjusted registration costs by state for a higher-end vehicle. For this table, a 2003 Ford Expedition with a retail value of \$41,380 was used. According to the *Kelly Blue Book*, the vehicle has 260 horsepower and a curb weight of 5,564 pounds. [1]

Table 2. Year 2003 Registration Costs for Model Year 2003 Ford Expedition

Vehicle Registration Costs by State					
Rank	State	Cost	Rank	State	Cost
1	California*	\$ 856.60	26	Nevada	\$ 33.00
2	Arizona*	\$ 704.93	27	Tennessee	\$ 32.00
3	Minnesota	\$ 189.00	28	Virginia	\$ 30.50
4	Utah	\$ 150.00	29	Arkansas*	\$ 30.00
5	Florida	\$ 145.60	30	Washington	\$ 30.00
6	Iowa	\$ 141.00	31	West Virginia	\$ 30.00
7	Illinois	\$ 78.00	32	Maine	\$ 25.00
8	Alaska	\$ 68.00	33	North Carolina	\$ 25.00
9	Rhode Island	\$ 66.00	34	Alabama	\$ 24.25
10	North Dakota	\$ 59.00	35	South Carolina	\$ 24.00
11	Michigan	\$ 54.00	36	Oklahoma	\$ 22.75
12	Missouri*	\$ 51.25	37	Indiana	\$ 20.75
13	New Hampshire*	\$ 50.00	38	Delaware	\$ 20.00
14	Vermont	\$ 50.00	39	Georgia	\$ 20.00
15	New Jersey	\$ 49.00	40	New York	\$ 17.50
16	Montana	\$ 48.75	41	Hawaii	\$ 16.00
17	New Mexico	\$ 46.00	42	Kentucky	\$ 15.00
18	Wisconsin	\$ 45.00	43	Oregon	\$ 15.00
19	Ohio	\$ 42.75	44	Mississippi	\$ 10.00
20	South Dakota	\$ 42.00	N/A	Colorado	Variable Depending on County
21	Maryland	\$ 38.00	N/A	Kansas	Variable Depending on County
22	Massachusetts	\$ 36.00	N/A	Nebraska	Variable Depending on County
23	Pennsylvania	\$ 36.00	N/A	Texas	Variable Depending on County
24	Connecticut	\$ 35.00	N/A	Wyoming	Variable Depending on County
25	Idaho	\$ 35.00	N/A	Louisiana	Unavailable

*Registration costs based on a new 2003 Ford Expedition 4WD Eddie Bauer Utility 4D weighing 5564 lbs. Retail value \$41380.00

Note: Some states publish a small range for vehicle registration costs. Example - North Carolina costs \$20 to \$25. In these cases, the upper end of the range was used.

From the table it is clear that the registration costs in California and Arizona are substantially higher than in other states. While the registration in most states is the same or slightly higher for the luxury vehicle, the registration cost for Arizona quadrupled,

making Arizona the second most expensive state for vehicle registration behind only California.

Both Arizona and California determine registration fees based on the value of the vehicle. In California, 2% of the vehicle's value is paid as part of total registration fees, regardless of vehicle age. Arizona uses a scale to determine the percentage of vehicle value paid towards registration fees. 1.68% of the vehicle cost is charged as a VLT in the first year, and each subsequent year the VLT decreases as the vehicle depreciates at a rate of 16.25% per year.

C. REGISTRATION COST CALCULATION

In addition to the high cost of registration, Arizona's method of calculating vehicle registration costs, including license tax, is complicated. The following figure describes the steps required for calculation, and demonstrates the complexity of the Current User Tax and Registration Fee. The example for year 2003 taxes is based on a 2000 Chevrolet Cavalier LS 4 Door sedan with a MSRP of \$13,745 registered in Phoenix.

<u>CALCULATION</u>	<u>EXPLANATION</u>
13,745.00	MSRP
X 0.60	
8,247.00	Assessed value of 60% of the manufacturer's base retail price
X (1-.1625)	
6,906.86	Manufacturer's base retail price reduced by 16.25% per year
X (1-.1625)	
5,784.50	Manufacturer's base retail price reduced by 16.25% per year
X 0.01	
57.85	Adjustment to put value in terms of hundreds
X 2.89	
167.17	Cost of Vehicle Tax at \$2.89 per \$100 based on assessed value
+ 8.00	
175.17	Cost with \$8.00 Registration fee
+ 1.50	
176.67	Cost with \$1.50 Air Quality Research fee
+ 0.25	
\$176.92	Total cost of Registration and Vehicle License Tax for Phoenix and Tucson residents, with \$0.25 Air Quality Compliance fee

Figure 1. Mathematical Calculation of Registration Expense

Under the current calculation system, numerous separate mathematical operations are required to determine the cost of this vehicle registration. This information is not given in the above format, rather it must be extrapolated out of a written paragraph and is slightly different in each circumstance. Without knowledge of discount rates and their

function, it would be very difficult for the public to determine their vehicle's registration cost. Below is the stated example on the ADOT website (www.dot.state.az.us):

It varies depending on the vehicle. There is a \$4.00 title fee; an \$8.00 registration fee [\$8.25 in metro Phoenix and Tucson, including a 25¢ air quality compliance sticker fee]; plus an air quality research fee of \$1.50; and a vehicle license tax (VLT) assessed in place of a personal property tax charged by other states. There may also be a weight fee for commercial vehicles and other fees. The VLT is based on an assessed value of 60% of the manufacturer's base retail price reduced by 16.25% for each year since the vehicle was first registered in Arizona (15% before 8/1/98). Then, as of the Dec 1, 2000 reduction, the rate is calculated as \$2.80 (new vehicles)/\$2.89 (used vehicles) for each \$100 of the assessed value. For example, for a new vehicle that costs \$25,000, the first year assessed value would be \$15,000 and the VLT would be \$420.00. The second year the assessed value would be \$12,562.50 and the VLT would be \$363.06. [2]

In a pretest designed to evaluate the relevance of a future larger formal survey, none of the individuals given the Motor Vehicle Division (MVD) example and the pertinent vehicle information were able to correctly determine the registration cost in Phoenix. The difficulty of the required calculation may be partially responsible for the public's unwillingness to convert to Arizona registration systems, which are complicated compared to the "flat fee" registration system of many other states.

In addition to this complexity in determining the cost of registration, there is an issue of price perception regarding registration fees. While Arizona actually has one of the lowest fees for registration in the nation, the addition of the VLT at the time of registration into a single payment creates the perception that Arizona rates are extremely high. This misperception of the true cost will, in many cases, lead individuals to seek out other registration options; such as continuing to register their vehicle in a state that has a lower perceived cost than Arizona.

Most states do not charge a VLT along with vehicle registration fees, making registration cheaper outside Arizona. Although these states do not charge a VLT, they often make up for the lost revenue through a separate charge billed after the fact or by increasing other taxes. In terms of actual registration cost, less the VLT, Arizona ranks as the lowest cost out of the 44 states researched for pure registration costs.

In combination, confusion over registration laws and Arizona's apparently high cost of registration hinder the law's effectiveness. In order to combat the problems of noncompliance with registration laws, several programs have been implemented and proposed. A breakdown of these programs follows.

D. TRADITIONAL METHODS OF ENFORCEMENT

Nationwide, states are using antiquated techniques for enforcement of vehicle registration laws. One method utilized in several states is having MVD officers visually

inspect tags that indicate compliance on vehicles in employee parking lots and at apartment complexes. [3] Although this technique is effective for finding local vehicles with expired registrations, improper out-of-state registrations are not easily spotted. In order to determine the residence of a vehicle owner, the name on the vehicle registration would have to match the name in a database of homeowners, renters, employment records, tax records, or school records. Current Arizona technology does not provide MVD officers with the resources to perform these checks on the spot. Instead, Arizona has implemented a warning system. National law enforcement databases provide information on vehicle owners' addresses, allowing a warning to be sent to those in violation. These violators have 30 days to respond, otherwise the vehicle will be cited if the location is known. [4] In Tucson and Phoenix, the Arizona Department of Public Safety is working with the Motor Vehicle Division to raise public awareness, and began issuing citations of at least \$300 for failure to register. [5]

In light of the difficulties enforcing registration laws, another method of enforcement has been setting up "tip lines" for people to turn in others who are not in compliance. The toll free "800" phone line, set up in Arizona by MVD Enforcement Services, received over 4,200 calls between the activation of the hotline in early October and November 18, 2002. [6] Jeanne Huber, an administrative assistant for Enforcement Services, said the Arizona tip line generated a substantial number of leads, many of them resulting in warnings or citations. This quick response in a six-week time period represents the public's willingness to aid in solving this problem (Appendix II). [7]

One important aspect of the tip line is it frequently enables the location of violators to be reported, allowing for more efficient enforcement. Coworkers and neighbors of those in violation provide the greatest potential for support to the MVD, as they often can report accurate information on the vehicle in question. As of November 1, 2002, offenders began receiving citations carrying penalties of \$300 plus late fees. [7] These costs are in addition to the registration fees the owner will be required to pay.

E. TECHNOLOGY BASED ENFORCEMENT

Although many techniques used for enforcement of vehicle registration laws do not have substantial technological support, a recent trend is increasing the role technology plays in assisting enforcement efforts. In Louisiana, the Baton Rouge Police Department has implemented a \$4.8 million in-car computer system. [8] The system provides 325 officers with the capabilities to check for current vehicle registrations as well as driving records and outstanding arrest warrants. The system requires the officer to simply enter the vehicle license plate number, and a check can be completed in the time an officer waits at a red light. In order for the system to work, all the state records systems have to be linked to the in-car computers in such a way that the databases are compatible with the machines. [8] This allows officers to obtain complete information useful for recognizing registration violations on the spot, enabling immediate enforcement.

1) Internet Registration

Although offering vehicle registration through the Internet may not be an obvious enforcement technique, any system that promotes legal registrations can help reduce the problems. Internet-based registration, which uses Link2Gov Corporation technology, is offered in Alabama, Arizona, Florida, Georgia, Hawaii, Illinois, Indiana, New Mexico, Texas, Tennessee, and the District of Columbia. [9] Start-up costs for an Internet registration system are relatively low, especially in comparison to the lost revenue associated with illegal or non-registrations. A system similar to Link2Gov was recently implemented in Kansas for \$500,000. [10] Internet systems allow users to register their vehicles 24 hours a day, and at greater speeds than traditional methods. The Florida Link2Gov system claims registration can be completed in under four minutes.

2) Pegasus WPX

To help enforce vehicle registration laws, Pegasus WPX Turnkey systems would involve placing special registration tags on the windshield of the car instead of on the license plate. The technology utilized would be a scanning system similar to the checkout line at a grocery store. According to the company website (www.wernerpegasus.com), the technology has been used on 20 million documents without a single forgery. [11] Although the technology is intended to close possible loopholes in document verification (i.e. forgery or alteration), the purpose of implementing the technology for vehicle registration enforcement would be for improved field verification capabilities. Enforcement officers would be able to read the information encrypted on the vehicle tag and immediately determine if the vehicle's registration is in compliance with state laws. This technology would require MVD officers to continue their efforts of checking cars in parking lots and apartment complexes; however, the effectiveness of the efforts could be increased through the immediate feedback feature of the technology.

3) Radio Frequency Identification

A more technologically advanced system, with potential for use in vehicle registration enforcement, is Radio Frequency Identification (RFID). With RFID, a tag, similar to the one used now, is placed on a vehicle's license plate. The new tags, however, can transmit and receive data within one-tenth of a second over a limited range. The technology is currently used for electronic toll payment, but at least one company, TransCore, is proposing Electronic Vehicle Registration (EVR) as another use for the technology. Their product line, eGo, would allow law enforcement agencies to use RFID readers to screen traffic and to identify vehicles that are in violation of registration regulations. [12]

According to TransCore, as cars traveling up to 100 miles per hour pass by the reader antenna, EVR would "allow state and national agencies to automatically detect and screen, via RFID technology, motor vehicles for compliance with Federal or state registration regulations and to correspondingly automate enforcement actions and

violation processing for noncompliant vehicles.” Regulation compliance checks could include vehicle registration, emissions, valid insurance, and outstanding unpaid traffic or parking violations. Additionally, the company claims “The automation of vehicle registration compliance and enforcement can benefit agencies by freeing up manpower from labor-intensive work so resources can be directed to more important law enforcement tasks.” [12]

The technology is already in use in Dallas/Fort Worth, the first city allowing RFID to be used for payment of tolls and parking fees. According to Jeffrey P. Fegan, executive director at the Dallas/Fort Worth International Airport, “We estimate that the new PassKey lanes will increase the number of vehicles through the plazas from 180 per hour to 720 per hour.” The tags cost from under \$10 to \$55 each, depending on quantities and capabilities required. [12]

F. SUMMARY

Vehicle registration violations are a problem in many states, in large part due to the differential in registration costs from state to state. Arizona is among the most expensive states for vehicle registration when the VLT is included in the registration cost; this combines with other local factors to make the problems in Arizona more prevalent. With large numbers of winter visitors and out-of-state students, Arizona faces a difficult task in enforcing vehicle registration laws. Students and visitors remaining in Arizona for fewer than seven months out of the year are exempt from the requirement of registering in Arizona, meaning a large number of out-of-state plates in Arizona are in fact in compliance with registration laws. This unusual circumstance further hinders law enforcement, as current practice would require thorough manual and time consuming investigation of each plate to ensure adherence.

The technology available for vehicle registration appears promising. However, the cost of these enforcement tools may be too high to be cost effective. With more than 3 million private vehicles registered in the State of Arizona, the costs of technology implemented on individual vehicles must be kept to a minimum to maintain feasibility.

II. VEHICLE REGISTRATION STATUTES

Any resident of Arizona who owns a non-exempt vehicle must register said vehicle pursuant to Arizona Revised Statutes (ARS) 28-2153, which states:

A. A person shall not operate, move or leave standing on a highway a motor vehicle, trailer or semi trailer unless the motor vehicle, trailer or semi trailer has been registered with the department for the current registration year or is properly registered for the current registration year by the state or country of which the owner or lessee is a resident.

B. A resident shall not operate, move or leave standing on a highway a motor vehicle, trailer or semi trailer that is:

1. Owned by a nonresident and that is primarily under the control of a resident of this state for more than seven months unless the motor vehicle, trailer or semi trailer has been registered with the department for the current registration year.

2. Leased by the resident for more than twenty-nine days unless the motor vehicle, trailer or semi trailer has been registered with the department for the current registration year.

C. This section applies to a trailer or semi trailer without motive power unless the vehicle is disabled or is being towed as an abandoned vehicle at the direction of a law enforcement agency.

D. This section does not apply to:

4. An owner permitted to operate a vehicle under special provisions relating to lien holders, manufacturers, dealers and nonresidents.

6. A motor vehicle that is being towed by a tow truck that has been registered and for which a permit has been obtained pursuant to section 28-1108.

A registration is obtained under the provisions of ARS 28-2157; most notable to this case are subsection A and subsection E:

A. A person shall apply to the department for registration of a motor vehicle, trailer or semi trailer on forms prescribed or authorized by the department.

E. The person shall include with the application the required fees and the certificate of title to the vehicle for which registration is sought. The registering officer may waive the requirement that the applicant present a certificate of title at the time of making an application for renewal if the registering officer has

available complete and sufficient records to accurately compute the vehicle license tax.

If a person as defined in ARS 42-5151 fails to meet this requirement they will be in violation of the law under ARS 28-2532 stating:

A. Except as provided in subsection B of this section, a person who is the resident or nonresident owner or operator of a motor vehicle, trailer or semi trailer that is required by law to be registered in this state and that is not registered or does not display license plates assigned by the department for the current registration year and who operates or knowingly permits the vehicle to be operated on a highway is subject to a civil penalty of three hundred dollars notwithstanding section 28-1598.

The criteria for classification of a person as a resident can be found in ARS 28-2001. In addition to these penalties a violation falls under ARS 28-2162 subsection A with the remaining subsections referring to exemptions.

A. If a vehicle is operated on a highway without payment of the registration or transfer fee, the fee is delinquent. If the fee is not paid before the date on which the vehicle is required to be registered for the current registration year, the department shall collect a penalty. The penalty is eight dollars for the first month of delinquency and four dollars for each additional month, not to exceed a total penalty of one hundred dollars. Registration of a vehicle in the name of the applicant for the year immediately preceding the year for which the application for registration is made is prima facie evidence that the vehicle has been operated on the highways during the year for which the application for registration is made.

In addition to vehicle registration fees, a use tax must be paid to the State under ARS 28-2056 which references title 42, chapter 5, article 4, and states:

A. The registering officer shall collect the use tax imposed under title 42, chapter 5, article 4 at the time of application for a transfer of title or registration of a vehicle. The registering officer shall issue a receipt, in a form prescribed by the department, for the amount of tax paid. The registering officer shall not process an application for transfer of title or registration of any vehicle on which the use tax is imposed under title 42, chapter 5, article 4 until the tax is paid.

These taxes and registration fees are due at the time of purchase or import of the vehicle into the State. This is defined by ARS 42-5151:

12. "Person" means an individual, firm, partnership, joint venture, association, corporation, estate, trust, receiver or syndicate, this state or a county, city, municipality, district or other political subdivision or agency thereof.

13. "Purchase" means any transfer, exchange or barter, conditional or otherwise, in any manner or by any means, of tangible personal property for a consideration, including transactions by which the possession of property is transferred but the seller retains the title as security for payment.

14. "Purchase price" or "sales price" means the total amount for which tangible personal property is sold, including any services that are a part of the sale, valued in money, whether paid in money or otherwise, and any amount for which credit is given to the purchaser by the seller without any deduction on account of the cost of the property sold, materials used, labor or services performed, interest charged, losses or other expenses, but does not include:

(a) Discounts allowed and taken.

(b) Charges for labor or services in installing, remodeling or repairing.

(c) Freight costs billed to and collected from a purchaser by a retailer for tangible personal property which, on the order of the retailer, is shipped directly from a manufacturer or wholesaler to the purchaser.

(d) Amounts attributable to federal excise taxes imposed by 26 United States Code section 4001, 4051 or 4091 on sales of heavy trucks and trailers and automobiles or on sales of use fuel, as defined in section 28-5601.

These regulations are based upon a presumption under ARS 42-5152:

It shall be presumed that tangible personal property purchased by any person and brought into this state is purchased for storage, use or consumption in this state.

Once a person has fallen under the jurisdiction of these statutes, they are responsible under ARS 42-5155 subsection C and ARS 28-2003 subsection A paragraph 3 to pay a tax. The tax rate shall equal the rate of tax prescribed by section 42-5010, subsection A, as applied to retailers and utility businesses according to the respective classification under articles 1 and 2 of this chapter for the same type of transaction or business activity. For the registration of a motor vehicle this cost is \$8 and the fee for motorcycles is \$9.

As indicated in the MVD example of the application of this registration fee and use tax:

The total fee varies depending on the vehicle. There is a registration fee of \$8.00 (or \$8.25 in metro Phoenix and Tucson, including 25¢ air quality compliance sticker fee); plus an air quality research fee of \$1.50; plus a vehicle license tax (VLT) assessed in place of a personal property tax charged by other states. There

may also be a weight fee for commercial vehicles and other fees. The VLT is based on an assessed value of 60% of the manufacturer's base retail price reduced by 16.25% for each year since the vehicle was first registered in Arizona (15% before 8/1/98). Then, as of the Dec 1, 2000 reduction, the rate is calculated as \$2.80 (new vehicles)/\$2.89 (used vehicles) for each \$100 of the assessed value. For example, for a new vehicle that costs \$25,000, the first year assessed value would be \$15,000 and the VLT would be \$420.00. The second year the assessed value would be \$12,562.50 and the VLT would be \$363.06.

This tax is a use tax on any tangible personal property that a person may use, store or consume upon which a tax is imposed. As such, it is enforceable under ARS 42-5163, which states:

Every tax imposed by this article and all increases, interest and penalties thereon shall become, from the time they are due and payable, a personal debt of the taxpayer to the state, and may be collected by action in tax court instituted in the name of the state by the attorney general upon request of the director. Such remedy shall be in addition to other existing remedies or those provided in this article.

ARS 28-2056, in reference to Title 42 Chapter 5 Article 4, states the use tax on a vehicle and the \$8.00 registration fee must be paid at the same time and prior to the issuance of registration. However, it may be possible to separate the tax and fee under ARS 42-5167, which regulates use tax direct payment, stating:

A. A person may elect to pay use taxes directly to the department under this article if the person:

1. Applies to the department for a use tax direct payment permit. The application must be on a form prescribed by the department setting forth the name under which the applicant transacts or intends to transact business, the location of the place or places of business where the applicant intends to make direct payment of use taxes and any other information that the department may require. The application must be signed, in the case of:
 - (a) A natural person, by the owner.
 - (b) An association or partnership, by a member or partner.
 - (c) A corporation, by an executive officer or another person specifically authorized by the corporation to sign the application.
2. Agrees to self-assess and pay directly to the department any use tax liability incurred under this article.
3. Certifies to the department that the person purchased for the person's own use tangible personal property at a cost of five hundred thousand dollars or more, in the aggregate, during the immediately preceding calendar year.

B. The department shall issue a use tax direct payment permit to any applicant that meets the requirements of subsection A of this section.

C. If the department deems it necessary to protect the revenues to be collected under this section, it may require a person to file a bond to secure the payment of such amounts pursuant to section 42-1102.

D. A person who holds a valid use tax direct payment permit shall:

1. Self-assess and pay directly to the department use taxes due under this article for all tangible personal property subject to use tax.
2. Report the tax on a tax return prescribed by the department.

E. A holder of a use tax direct payment certificate may issue a use tax direct payment certificate to any retailer or seller, subject to all of the following:

1. The certificate shall be in a form prescribed by the department and must be signed by and bear the name, address and permit number of the holder of the use tax direct payment permit.
2. The certificate is effective until the permit holder revises or withdraws the certificate or until the retailer or seller receives actual notice that the department has revoked the permit.
3. The certificate relieves the retailer or seller of the duty to collect use tax only if taken in good faith from a person who holds a use tax direct payment permit. The department may periodically publish on its web site a list of taxpayers by name with tax identification numbers who have been issued direct payment permits. A purchaser holding a direct payment permit who issues a use tax direct payment certificate that is accepted in good faith by a retailer or seller of tangible personal property shall be liable for use tax and related interest and penalties with respect to any transaction that the department subsequently determines properly subjects the vendor to the transaction privilege tax and not use tax. The vendor shall be relieved of the duty to pay transaction privilege tax on such transactions.
4. In addition to any use tax liabilities, a holder of a use tax direct payment permit that gives a use tax direct payment certificate to a retailer or seller is subject to the same penalty provisions that apply to a retailer or seller.

III. EXISTING PRACTICES

A. CURRENT SITUATION

As recently as February 2003, despite a growing population of 5.3 million people, the responsibility for enforcement of vehicle registration compliance in Arizona was assigned to a single officer. [14] As of June 2003, the number had increased to 14 enforcement officers capable of writing citations. [15] While there are 4.6 million vehicles registered in Arizona, there are no reliable data available to determine the total number of vehicles in the state. The 2000 census found that 1.68 million (74.1%) of Arizona residents in the group classified as workers age 16 and older drove alone to their place of employment. [14] The 14 current officers are responsible for enforcing registration laws as they pertain to these vehicles, and are responsible for following up on a database containing more than 10,000 active cases waiting for examination and enforcement. The officers work with a small staff to determine who is in violation of State registration requirements, and to begin the process of enforcing those regulations. Unfortunately, the huge volume of complaints and the sheer size of Arizona make this a very difficult task.

B. RESIDENCY REQUIREMENTS

Arizona residency requirements, coupled with exceptions to those requirements, further complicate vehicle registration enforcement. There is no single set of circumstances that will always result in a person being classified as a resident. [16] For example, the database of new driver's licenses issued in Arizona is often used to generate new leads and develop a mailing list of people who will receive a letter, informing them of the registration requirements. However, this process does not guarantee the finding of a violator simply because he or she has an Arizona driver's license and no Arizona registration. Possession of an Arizona driver's license does not imply that a person is a resident of Arizona, but may only circumstantially indicate that he or she had the intent to become a resident. In addition, it is quite plausible for a person to have a driver's license and not have access to a vehicle, or to drive a vehicle that is properly registered by a family member or acquaintance, and therefore not be in violation of any regulations.

C. CURRENT METHODS OF ENFORCEMENT

The time required to sort through regulations, exceptions, exemptions and extenuating circumstances is far greater than is allocated to the enforcement division. With the current budget, the only option is to send a letter to the suspected violator and allow people to self enforce, or to convey the notion that those in violation will in fact be found and penalized. While this method does obtain some positive results, it certainly does not fully address the issue.

One method that has proven successful is searching employee parking lots for vehicles registered in other states. Since only employees are supposed to park in these locations and employees are, with few exceptions, residents in the state, the employee

parking lots provide opportunities to identify violators. A team of ADOT employees, who are not certified to issue citations, goes out to these locations and leaves notices on the vehicles with out-of-state license plates. The notices inform vehicle owners of the ARS regulations pursuant to their vehicle and instruct them on how to go about registering the vehicle if they are residents of Arizona.

The reason ADOT employees simply leave a notice rather than a citation is the issue of residency requirements. Officers cannot leave a citation without sufficient evidence to support their claim of a violation, and they cannot obtain this evidence on the spot in employee parking lots, as residency exceptions are not always visually apparent. For example, a student who attends one of the local postsecondary institutions and pays an out-of-state tuition rate is not subject to Arizona registration requirements if he or she has a permanent residence in another state, regardless of his or her employment status. Since this and other exceptions exist, it is not possible to issue a citation without significant resources invested in an investigation of the particular circumstances of each case. Despite these limitations, this campaign is largely successful because the people who receive the letters often comply with registration requirements. Below is a graphical illustration of the process that is currently employed.

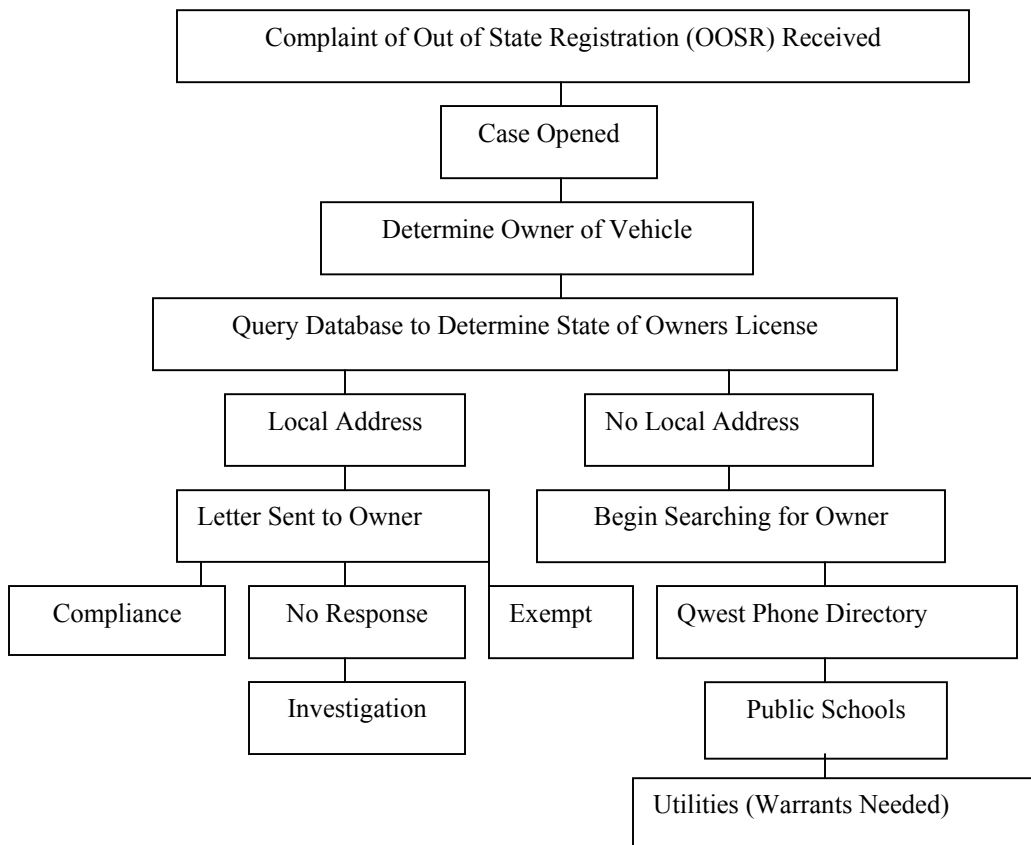


Figure 2. Complaint Process Flow Chart

D. DIFFICULTY OF ENFORCEMENT

The current residency statute, ARS 28-2153 states that a person must reside outside of Arizona more than five months a year and not have their primary residence in Arizona to not be classified as an Arizona resident. [13] This makes proof of residence difficult because it is almost impossible to track the location of an individual and ensure that he or she is in fact spending less than seven months of the year living in Arizona.

The longer the period in which visitors are allowed to reside in Arizona without being considered residents, the more difficult proving residency becomes. Sergeant Travis LeGere of the ADOT MVD believes changing the required time spent in Arizona for residency from seven months to five months a year would make the enforcement easier. [15] However, this raises concerns of potential conflicts with other states' residency statutes. To avoid these conflicts, the ideal time period to denote residency would be 183 days in a given year, meaning anybody residing in Arizona for six months or more would be classified as a resident. While this period would be ideal for winter visitors and those who reside in Arizona for short periods of time, it is not necessarily the ideal length of time for Arizona's purposes. Allowing visitors a period of 90 days before they are classified as a resident would leave sufficient time for vacationers as well as serve the interests of enforcement by making the task of proving residency significantly easier.

The problem of proving residency is particularly troublesome in Sun City and other communities with large populations of winter visitors who may own a second residence in another state or country. The scope of this problem is quite real; upwards of 27% of licensed drivers in Arizona are over the age of 55 and fall into the age profile of a winter visitor, according to the Federal Highway Administration. [17] While it is acknowledged that not all of these individuals are not permanent residents, the significance of this percentage needs to be noted. This is where the tracking issue becomes the most difficult to follow. If a person were to leave Arizona in the early summer months and not return to their Arizona residence for 6 ½ months, it is impossible to prove that the individual is a legal resident without knowing the exact location of that individual on a daily basis. This type of tracking, while necessary to make a case for registration evasion, is not only impractical on an economic level, but also from a Constitutional standpoint.

Table 3. Licensed Drivers in Arizona by Age and Sex

(numbers in thousands)		
Age	Male	Female
19 and under	81	72
20-24	146	132
25-29	170	153
30-34	175	162
35-39	191	186
40-44	188	186
45-49	169	170
50-54	152	153
55-59	119	121
60-64	91	93
65-69	80	79
70-74	70	72
75-79	56	61
80-84	34	36
85 and over	19	18
	1,741	1,693
SOURCE: U.S. Department of Transportation, Federal Highway Administration, <i>Highway Statistics 2000</i> , Washington, DC: 2001.		

An additional complication to this issue is the seeming economic incentive for people to not comply with the registration statutes. The statutory penalties for noncompliance tend to be in favor of the violator and in some cases, purely in terms of out-of-pocket dollars, it is more economical to not register than to follow the law. This can be illustrated using an example vehicle with a registration that expired in January of 2001 and was driven for 12 months before the violation was addressed. Rather than having to pay a back registration fee equal to the amount of the unpaid fees, the violator is instead fined \$8 for the first month of noncompliance and \$4 per month thereafter. [15] This results in a yearly cost of \$52, which is less than 40% of the average registration cost and significantly cheaper than the registration of a more expensive vehicle. Were this penalty to be raised to a level above the registration cost, people would have more incentive to follow state registration requirements. Were retroactive fees to be charged for the period when the vehicle was not registered, in addition to the penalty fees, there would be an added incentive to follow the regulations. The fees would also provide an added source of revenue to the state.

In Arizona, another issue hindering enforcement efforts is that police are not readily able to enforce the registration requirements. The officers are able to detect expired registration from Arizona and other locations, since the expiration of those registrations is visible on the documents a driver must present to the officer during a traffic stop. What the officer is not able to determine is whether the individual is registered in the correct locality. The only option the officer has during the stop is to ask

questions of the individual. If the individual chooses to answer the questions in such a way as to mislead the officer into believing that he or she is correctly registered, there is no way for the officer to verify the answers. Thus, if the officer suspects that the individual may not be correctly registered, the officer's only option is to turn in a new lead to the database, which, as noted above, contains over ten thousand entries pending investigation. Since the police officer is not able to verify any information on-site, it is rare for the officer to issue a citation. In such situations, the officer has an opportunity to enforce state registration requirements, but is not able to do so due to a lack of information available in the field.

IV. PROBLEM SIZE AND SCOPE

A. REGISTRATION PROBLEM SEVERITY

Problems occurring within the Arizona vehicle registration process include Arizona residents with out-of-state plates and urban residents evading the vehicle emissions inspection requirement by registering vehicles to addresses outside the non-attainment region. Existing literature regarding these issues is limited, due to the difficulty in quantifying the problems. According to recent estimates, Arizona is losing up to \$25 million annually in tax revenue due to residents registering their vehicles out-of-state. [18] Considering that Arizona collected \$601.6 million in vehicle license tax revenue in fiscal year 2002, [19] this amounts to an approximate noncompliance rate of approximately four percent of residents.

This problem is driven by a high number of people moving to Arizona, and has become a greater problem in recent decades as the state population continues to grow. Data from the 1990 and 2000 Federal Census shows that the population of Arizona increased 40% in the decade, from 3,665,228 in 1990 to 5,130,632 in 2000 (Appendix III). This growth far exceeds the national rate of 13% over the same period. Maricopa County, which accounts for roughly 60% of the total population of Arizona, has an even higher 10-year growth rate of 45% (Appendix IV). With a population increasing at these rates, there are more opportunities for noncompliance with vehicle registration laws by new residents.

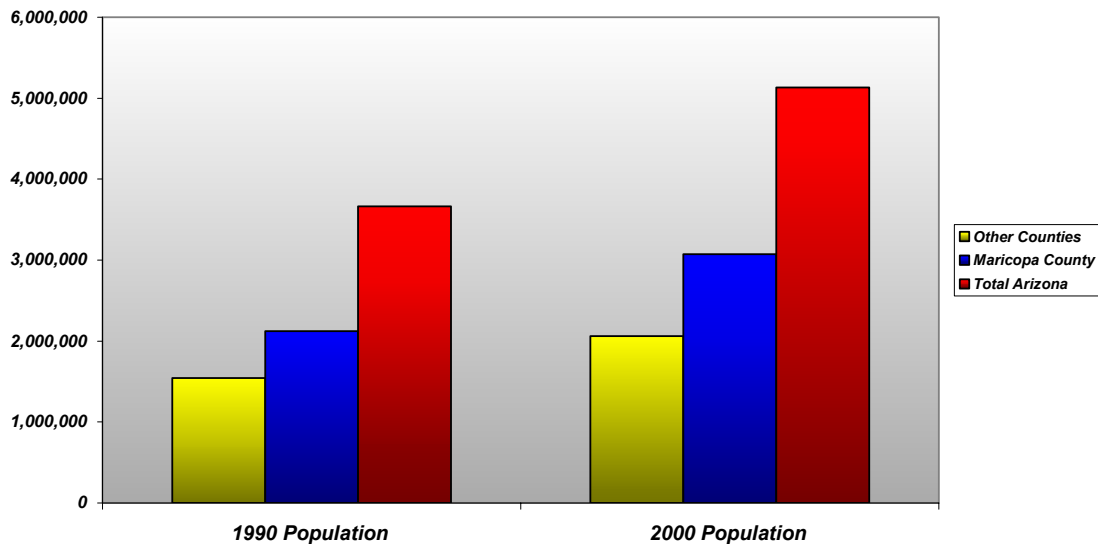


Figure 3. Arizona Population Growth

In addition to this high total growth rate, Arizona also has a net migration rate of 45 per every 1,000. [20] This net migration rate is amongst the highest in the country and indicates that people not only move to Arizona in large numbers, but they also, along

with the State's current residents, tend to stay. For comparison, California has a net migration rate of 1.5 per 1,000. [20] This means that in California, for every 10,000 residents at the beginning of a year, there will be 10,015 residents at the end of the year; while for every 10,000 Arizona residents at the beginning, there will be 10,450 at the end of the year.

Table 4. Migration Rates

Total Migration	
California 1990 – 1996	50,000
Arizona 1990 – 1996	200,000
Per Capita Migration Rates	
California	0.001571545
Arizona	0.04547594
AZ rate as % of CA rate	2894%
AZ / CA Multiplier	28.94

The above table compares the migration rates of Arizona and California. Arizona's migration rate is almost 29 times California's on a per capita basis. The per capita number is important because of the clear illustration it provides of the magnitude of issues faced by Arizona due to new residents.

If Arizona did not have a problem with registration of new vehicles in the State, it would be expected that registration numbers would increase proportionately with population levels. This is not the case however. The growth rate of vehicle registration is 8% slower than the population growth rate (Appendix V). This, despite the fact that the number of vehicles per household remains constant at an average of 1.67 per household in the state. [21]

The logical inference from the data above regarding population growth and registered vehicle growth is that new residents to the State are not following the provisions of the Arizona Revised Statutes related to lawful vehicle registration. Rather, many residents of the State are continuing to maintain registration of their vehicles in other states or not register at all. There are two main reasons for this action. The first and more benign reason is new residents who move to Arizona are taking advantage of the period of time left before their existing registration in their home state expires. These residents simply wait until their existing registration is required to be renewed, and at that point register in Arizona and become compliant with Arizona regulations. These residents will typically be in violation less than a year, as they await the expiration of their current registration. The second type of violator is one who knowingly and fraudulently re-registers his vehicle in another state despite residing in Arizona. This is done to reap the personal economic benefit of lower registration rates in other states. As previously noted, Arizona is among the most expensive states in the country for the cost of vehicle registration when the VLT is considered. This fact gives people a strong incentive to find alternates to Arizona registration. As an example, a resident of Arizona with a 2003 Ford Expedition with a retail value of \$41,380 would pay a \$704.93 registration fee in

Arizona, while the fee for the same vehicle in New Mexico or Nevada would be \$46 or \$33 respectively. Given this disparity, the incentive for noncompliance is substantial.

Cydney Demodica, spokeswoman for the Arizona MVD, estimates the yearly cost of noncompliant vehicles in the state is around \$25 million a year. [18] This estimate is in-line with bottom-up analysis based on U.S. Census data related to the State and MVD information on the number of vehicles registered each year. Back calculation of Ms. Demodica’s estimate of a yearly cost of \$25 Million and an average state wide registration cost of \$120-\$150 per vehicle yields an estimate that between 3 and 4% of all Arizona vehicles are improperly registered at any given time. As shown in Table 5, this estimate is corroborated by MVD data and U.S. Census estimates.

Table 5. Noncompliance Rates

	4-Year Rate of Noncompliance	# of Vehicles	Lost Revenue
Arizona (without Maricopa County)	1.24%*	44,100	\$ 5,953,532.16
Maricopa County	3.15%*	112,424	\$ 15,177,177.58
All Arizona	4.39%	156,524	\$ 21,130,709.74
Weighted Average Growth	2.36%	75,873	\$ 10,242,912.48
Mean Growth	2.19%	70,410	\$ 9,505,333.28
Median Growth	2.19%	70,410	\$ 9,505,333.28
MVD Estimate	3.50%	112,333	\$ 15,165,015.08
Differential from MVD Estimate	1.38%	44,190	\$ 5,965,694.66

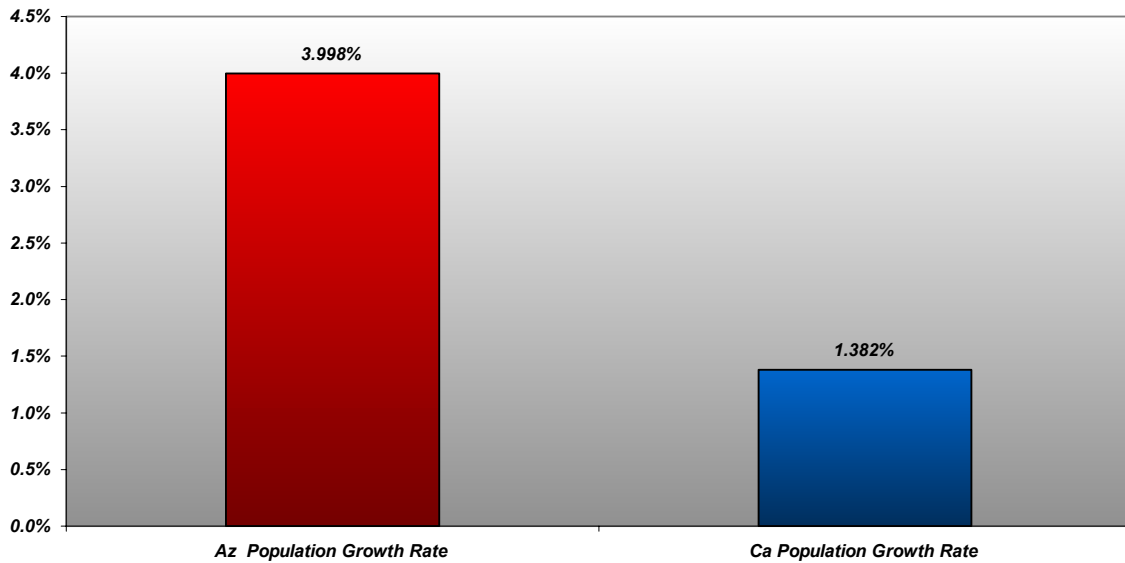
* These numbers represent the component value added by the specified geographic region. Compared to the Arizona population, 1.24% of all Arizona residents are currently violating registration statutes outside of Maricopa County, while 3.15% of all residents are currently violating statutes inside Maricopa County.

As illustrated in the above table, a significant majority of violators of Arizona registration laws reside within Maricopa County. Nearly three out of every four registration violations in Arizona occur in Maricopa County. This is to be expected as most of the recent population growth in the state has occurred in Maricopa County.

The estimate of \$25 million in lost revenue can be divided into the same two main groups along with the profile of violations. Based on census data, it is possible to extrapolate an approximate number of new violators in a given year. This calculation results in a one-year loss of \$9.83 million from first-time violators with the remaining \$15.16 million in lost revenue coming from recurring violators (Appendix V). There is no accurate way to determine exactly what percentage of first time violators will continue to improperly register in the future since there is no way of obtaining hard numbers on how long the individuals responsible for the recurring lost revenue have done so.

Estimates in California, the state with the consistently highest vehicle registration fees, range from \$40 to \$60 million in lost revenue a year due to registration violations. [22] While this number, even at \$40 million, is certainly larger than Arizona’s estimated loss, it is not as significant given the much greater population of California and its proportional registration revenue. The reasoning behind this returns to the growth rates

and net migration rates mentioned above. Since California has much lower net migration and growth, they also have a much lower incidence of noncompliance with registration



statutes by new residents because they have far fewer new residents per capita.

Figure 4. Growth Rate Differentials (1990 to 2000)

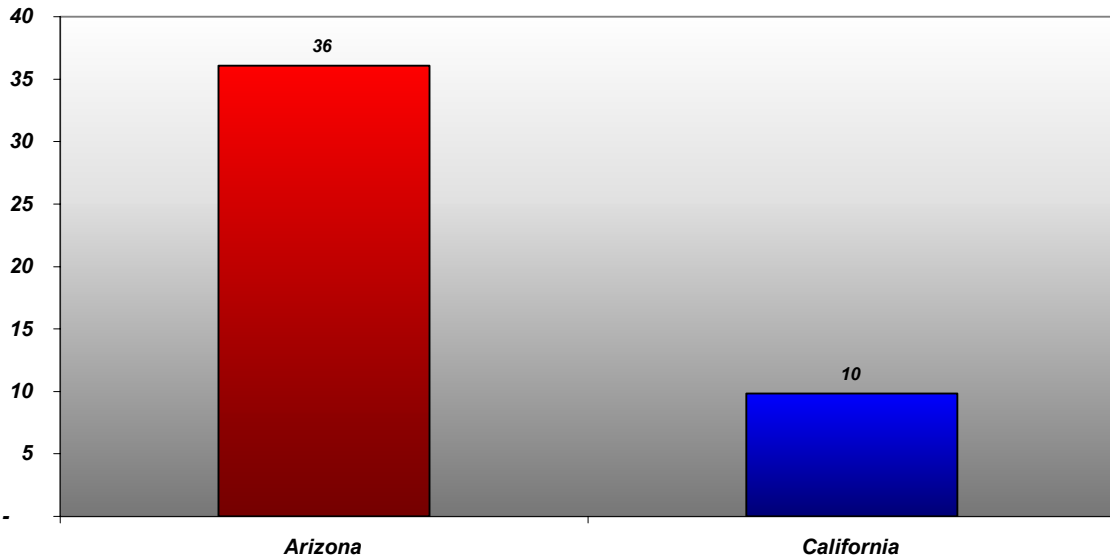


Figure 5. Improper Registrations per 1000 Residents

As displayed in the graphs above, Arizona is confronted with a much more pressing issue than is California. The drastic number of improper registrations, along with a rapidly increasing population of individuals migrating to Arizona, presents a

situation in which violating registration laws is tempting and as a result Arizona is losing significant revenues.

Analysis shows that the current MVD estimate of 3-4% of all vehicles being improperly registered in violation of Arizona law, resulting in a yearly loss of \$25 million to the state, is accurate within a non-material statistical error threshold. As the population of Arizona continues to grow, illegal registrations and non-registrations will become an increasingly pressing issue as the financial burden placed on compliant residents becomes greater each year. While it is clear that enforcement efforts are necessary, taking the appropriate course of action requires careful deliberation.

B. WHAT IS BEING DONE ELSEWHERE

In order to find the best strategy for Arizona to combat the problem of vehicle registration violations, it is important to consider what is being done in other states. The states surveyed for this section were Florida, Minnesota, California, and Utah. Florida was selected for its similarities to Arizona in terms of the number of winter visitors and retirees, who are often difficult to track, in addition to high cost of registration. Minnesota, California, and Utah were selected based on their high registration costs.

1) Florida

In the case of the example Ford Expedition (Table 2), Florida is the fifth highest state for registration costs. Despite this fact, Florida does not have a division for enforcing vehicle registration laws. According to its Department of Highway Safety and Motor Vehicles, nothing is being done to proactively curtail illegal non-registrations. Since registration violations are considered a secondary offense, those failing to register legally in Florida are caught only if they are pulled over for another offense. Florida does not maintain a tip line for citizens to report those who are not compliant, meaning law enforcement officers in Florida have few opportunities to catch those in violation of registration laws. Although the State contacts could not offer an estimate of the revenue lost due to noncompliance, they stated their enforcement priorities were focused on more “serious” crimes. [23]

2) Minnesota

Unlike Florida, Minnesota has recognized the significance of noncompliance to its registration statutes. According to Larry Ollila in the Department of Public Safety, Minnesota’s biggest problems come from Minnesota residents registering in Wisconsin, Iowa, North Dakota, or South Dakota, due to the lower registration costs in those states. Although Minnesota’s initial registration fee is high, the problem of illegal out-of-state registrations has diminished over the past few years because of a reduction in registration taxes and the efforts of the Minnesota Vehicle Crimes Task Force. [24]

In 2000, Minnesota conducted a concentrated effort similar to what Arizona Enforcement Services is currently involved in. The Minnesota Vehicle Crimes Task Force encouraged people to report violations and offered a phone number for the public

to report violators. According to Captain Dave Graham of the Task Force, an amnesty period was offered to encourage voluntary compliance. Those in violation of the law were given a period in which they could register their vehicles in Minnesota without facing fines or punishment. Although it was impossible for the State to quantify the additional revenue generated through voluntary compliance, the program was thought to be successful. Minnesota could not offer any current estimates of noncompliance. However, Captain Graham did state that previous estimates indicated one to two percent of vehicles were registered fraudulently - a total of 50,000 vehicles worth about \$6.8 million in registration revenue. [25]

3) California

California Highway Patrol Sergeant Pete Camm reported that California suffers an annual revenue loss of \$40 million to \$60 million due to improperly registered passenger vehicles. Much of this problem is attributed to the significantly lower registration costs in Nevada and Oregon, as well as winter visitors who do not follow regulations. To combat this problem, officers are equipped with laptops that have the capability of running registration checks through either California or national registration systems. These systems allow officers to check for residency of the vehicle owner, which is important when the vehicle is registered out of state or the registration tags are not current. California is also conducting an experimental study with wireless laptops that would enable officers to have access to Internet databases in addition to the California and National registration systems. This would further enable officers to check for residency when a suspected registration offender is stopped. [22]

Another enforcement tactic employed by California is a program called the California Residents with Foreign Registrations Program. This program seeks to find those with illegal out-of-state registrations and ensure compliance, utilizing a system similar to the Arizona tip-line. Claims received through the program are investigated and turned over to the California Division of Motor Vehicles, which subsequently sends out demand letters to those in violation of registration laws. [22]

4) Utah

As shown in Table 1 and Table 2, Utah is the state with the fourth highest registration cost. Although the total cost of registering a vehicle in Utah is less than it would be in Arizona, the value of the revenue to the state is significant enough that Utah imposes a \$1,000 fine for failing to legally register. Despite this, Utah does not have the infrastructure for fighting the problem. According to the Utah Motor Vehicle Enforcement Division's Investigations Department, a small number of reports come in from a tip line, enabling the Investigations Department to investigate and issue citations. Also, police officers have the authority to issue tickets, but only if they can get an admission of residency from the violator. Due to this requirement, it is difficult for Utah to effectively enforce the law. [26]

From discussions with representatives from these four states, it is clear that California and Minnesota have similar problems most similar to those of Arizona. Like

Arizona, California has a significant financial interest in curtailing registration violations, with estimates of lost revenue ranging from \$40 million to \$60 million per year. The table below demonstrates the severity of the differential between lost revenue in Arizona compared to California and Minnesota.

Table 6. Revenue Lost Due to Noncompliance with Vehicle Registration Laws

	Estimated Revenue lost per year	Number of Residents (census 2001 estimate)	Lost Revenue per Resident
Arizona	\$ 25,000,000	5,307,331	\$ 4.71
California low estimate	\$ 40,000,000	34,501,130	\$ 1.16
California high estimate	\$ 60,000,000	34,501,130	\$ 1.74
Minnesota	\$ 6,800,000	4,972,294	\$ 1.37

While this chart alone is enough to illustrate the severity of the problem in Arizona, it does not serve as an accurate representation of the total cost per resident of state registration violations, as additional costs such as enforcement and investigation expenses would have to be included.

Despite the high value of lost revenue estimates in California, the proportional cost per resident is as much as four times higher in Arizona than in California and is more than three times higher than the cost per resident in Minnesota. This is based on information obtained from estimates by the Arizona MVD, California Highway Patrol, and the Minnesota Department of Public Safety Vehicle Crimes Task Force. With this information, even if Arizona's estimate of lost revenue of \$25 million were overstated by \$15 million, Arizona would still have a higher lost revenue per resident than California would under their highest estimate, which has the second greatest loss per resident on the chart.

During the time period that this report was written, California made changes to its vehicle registration practices resulting in large increases in the total cost to register a vehicle. These were temporary changes, which are no longer an issue to this report as of January 28, 2004. The increased Vehicle License Fee (VLF), which went into effect on October 1, 2003, was rescinded by California Governor Schwarzenegger by Executive Order S-1-03. [27] All additional fees which were collected under the revised program will be refunded. The current laws and practices regarding California are the same as is stated in this report at the time of publication.

V. CONCLUSION AND RECOMMENDATIONS

The state of Arizona has a serious problem with vehicle registration compliance. Some residents of this State, new and longer term, go to great lengths to avoid registering their vehicle in the State. Only California shares a burden as large. However, California's problem is much smaller in relation to the size of that State's tax base. The reason that these two states stand alone in facing this problem of persistent, deliberate violation of registration statutes is because their vehicle registration fees are much higher than those of other states.

Forty-eight out of fifty states allocate a portion of every individual's state income tax to fund their departments of transportation related projects. Arizona and California put this burden on those who use the services - the drivers. In fact, in Arizona 60% of the VLT is diverted to subsidize the general fund budget. This creates a significant incentive for vehicle owners to try to evade paying vehicle registration fees in these two states.

When an individual registers a vehicle in Arizona, he pays a vehicle license tax, or VLT. This tax is essentially a personal property tax based on the estimated value of the vehicle calculated through a complex formula. In other states, an individual would essentially provide the same funding to government coffers through higher personal income taxes.

This system presents three problems for the State of Arizona. First, it makes it possible for an individual to gain a material economic advantage by registering his vehicle in another state, thus avoiding both the VLT and the offsetting higher personal state income taxes which the state of registration charges. Secondly, the high cost of registration with the VLT included creates the perception that the State of Arizona is price gouging, since the connection to lower income taxes is not widely known to the public. This perception causes people to feel as though they are being cheated, which provokes them to avoid compliance with the statutes. Finally, because the VLT is dependent on the value of the vehicle in question, a complex equation is required to determine the amount of the tax. Individuals not in possession of specific knowledge of financial discount rates and their application do not easily understand the equation. This creates a situation in which the public is being assessed a tax that is in their personal economic best interest not to pay. The tax is also significantly higher than what they perceive the costs should be, based on other registration experiences, and is unknown and confusing in its composition. Oftentimes individuals faced with these circumstances will not immediately and voluntarily comply.

In order to promote better compliance with the registration statutes, the State of Arizona needs some tools that are currently unavailable to them. The first tool that would be required to actively locate violators is a method of positively identifying residents of the State through a records check or database query. An example of a possible query would be: locate Arizona residents who hold an out-of-state driver's license. This simple statement, however, is incredibly difficult to validate given currently available information and legal privacy regulations. In order to answer this question, without the

voluntary participation of the individual, two things are needed. First, Arizona would need a system that has access to every MVD system in the country and is continually updated. This does not pose a problem and is already available.

The second requirement is to determine the residency status of the individual. Herein is the problem: ARS 28-2001 states the definition of a resident of the State of Arizona. The statute states that a resident is a person who, regardless of domicile, remains in this state for an aggregate period of seven months or more during a calendar year. To apply this statute without the voluntary participation of the individual, the database would need to contain the location of that person on a daily basis for the previous 365 days. If they did indeed spend greater than seven months within the State of Arizona, the person would be considered a resident. For obvious reasons, most people would not be comfortable with anyone, government agency or not, having this type of detailed information about their daily whereabouts. The text of ARS 28-2001 contains 15 other statements of residency and exceptions to residency that requires even more detail about the individual, their children, their employer, and domicile. Given this need and the fact that the burden of proof lays with the enforcing agency, there is no feasible way to maintain a proactive enforcement database.

The inability to effectively locate those individuals who do not voluntarily comply with registration statutes is compounded by the fact that people have an economic incentive not to divulge residency information. By violating the registration laws and not paying the VLT, residents are able to reduce their total payment amount. This amount is significant to most individuals as the differential can reach hundreds of dollars in many circumstances, depending on the cost of the individual's vehicle. In the case of the Ford Expedition example in Table 2, if the vehicle were registered in Mississippi, the state with the lowest registration costs, the difference in registration cost between Arizona and Mississippi would be \$694.93. This is enough of a difference to tempt people to violate a statute, especially when the perceived risk of being caught is low. Additionally, since the cost of registration increases with the cost of the vehicle, so does the incentive to violate the law. The result is that even individuals in higher income brackets are given a material incentive to not comply.

In light of the difficulties faced by Arizona in proving residency, as well as the prohibitive cost of implementing a system such as the Baton Rouge Police Department's \$4.8 million in-car computer system, the State is left with relatively few options for effective enforcement of current registration laws. Of the states with high registration fees, none provided enforcement practices superior to Arizona's current practices, and those with low fees do not face this problem. While the information obtained was useful, Arizona is in a unique situation and will need a unique solution for reducing the problem of registration violations. Based on information gathered, the State has few plausible options for improving enforcement practices in the near future.

First, the State could increase the current fines levied against noncompliant residents. This would involve changing current statutes to allow for registration fees to be charged retroactively, as well as allowing punitive fines to be charged. The benefits of

this option are significantly increased revenue to the State per citation, as well as an increase in voluntary registrations as noncompliant residents determine it is in their best interest to avoid a future citation. The drawbacks include the more difficult task of proving the residency of owners of vehicles in question, the difficulty of enforcing the increased fine structure, and the expense of a system capable of providing field officers with the tools necessary to write citations on the spot.

The second option to the State is to maintain the current practice of encouraging voluntary registration through warnings. This method has been successful in Minnesota, and is proving successful in Arizona as well. There are several benefits of this system. Once a suspected noncompliant vehicle is found, obtaining compliance is relatively easier due to low fines. Additionally, the cost of the current practice is low because the main cost factor is labor, and labor is somewhat proportionate to the increased revenue the system brings in (Appendix II). The major drawbacks include the fact that violators are still at an economic advantage by breaking current registration laws, and there is lower potential revenue to the State by neither charging registration fees retroactively nor charging a punitive fine.

Another alternative available to the State would be a combination of the previous options. An increase in the current fine structure, coupled with current enforcement efforts, could encourage violators to voluntarily register their vehicles upon issuance of a warning. This would be especially effective if an exemption to the fine is granted to those violators who identify themselves and comply voluntarily. A more substantial fine could increase revenue to the State from the higher fines as well as encourage higher levels of voluntary compliance by violators who comply without a warning as residents see a lower economic incentive to avoid registration. The fine increase could come in the form of a flat amount, such as an increase from \$4 to \$15 per month of violation, or it could come in the form of a percentage of the registration required. The fine based on a 100%-plus percentage of registration would discourage those with higher registration costs from violating the law, which is important since they are the same individuals who currently have the highest economic incentive for not legally registering their vehicles in Arizona.

Finally, Arizona could simplify enforcement by eliminating the current seven-month residency requirement and replacing it with either a shorter time period or a primary residence standard. The modification could classify anyone who own or rents a residence in Arizona, or who is registered to vote in Arizona, as an Arizona resident for vehicle registration purposes. The primary residence standard would apply to everybody, with the exception of full-time university students, who are currently exempted from residency requirements if they are registered in the state of their permanent residence. In order to keep the registration tax equitable, those who can prove their permanent residence is in another state could have the VLT component of their registration costs halved, in order to compensate for time out of Arizona as well as the possible necessity of dual registration. Applying this change would improve the ease of enforcement and make the tax more equitable for those who live in Arizona part-time, as well as for those who are currently burdened with higher taxes because of the non-taxation of many part-time residents. Additionally, requiring proof of an out-of-state residence would act as a deterrent to those attempting to avoid paying the Arizona VLT.

As the enforcement division is currently moving through a period of rapid expansion, quantifying improvements or targeting optimal levels of enforcement is difficult. From the 2003 Monthly Report (Appendix II), it is clear that increasing the number of enforcement officers has dramatically increased revenue collected. Although this is an important metric, something of equal, if not greater, importance is simply obtaining compliance on the greatest number of vehicles. The sooner Arizona residents who are currently in violation of registration statutes become compliant, the sooner the State begins receiving its authorized stream of registration payments from these residents.

The perception of the low risk associated with noncompliance is further enhanced by the consequences of a violation if an individual is found to be guilty of violating registration statutes. In the previous example, the individual owning the Ford Expedition would evade \$704.93 in annual registration costs in exchange for a \$52.00 fine. This is roughly 7% of the actual annual registration cost. Obviously this is an extreme situation, but it is also representative of the systematic issues within the registration system. Optimal levels of compliance are not possible as long as there are cases where the weak punitive actions of the State increase the incentive to violate the law. Were a retroactive fee to be charged for the period during which the vehicle was not registered in addition to materially increased penalty fees, this would provide both an added incentive to follow the regulations as well as an added source of revenue to the State. One option that would ensure that the fee was aligned with the individual’s economic situation would be to adopt the Internal Revenue Service’s guideline and impose a fee of 20% of the amount not paid on top of the back taxes owed. The table below demonstrates the revenue differential between revenue collected under the current system and revenue that would be collected under the proposed system for a registration that has been noncompliant for one year.

Table 7. Proposed Fine Structure

Revenue Changes Under New Fine Structure	
MVD Estimate of Number of Noncompliant Vehicles	112,333
Lost Revenue	\$(15,165,015.08)
Estimate of Average Registration Cost	\$ 135.00
Back Registration for Previous Year	\$ 135.00
Registration Due for Current Year	\$ 135.00
Fine	\$ 27.00
Fees	\$ 52.00
Total Proposed Fine	\$ 349.00
Current Revenue per Noncompliant Vehicle	\$ 187.00
Revenue Increase per Vehicle	\$ 162.00
Increase in Yearly Revenue Assuming 10% Enforcement	\$ 1,819,801.81

With the above penalties for violation in place, the next hurdle to overcome is the complexity of the calculation of registration fees and the VLT. On the MVD website, the explanation is given in paragraph form that lends itself to error. It would be much simpler

for the public if they could access a calculator on the site to give them an estimate of the total cost. This would provide a full explanation of registration costs and explain how the VLT is used in place of income taxes that they may have paid in other states.

Consultation with Andy Root, a local web developer, confirms that this would be technically plausible and actually rather simple programming. [28] The output could be itemized with an explanation of what each charge is and why it is being assessed. By building a greater understanding of what they are paying and why, the public will be more willing to register in Arizona. The input of basic information regarding the vehicle and the individual’s residence could produce an output such as the example displayed below, with “What is This?” links to more detailed explanations of the charges. These links would serve to educate Arizona residents about the purpose of each component of their registration expenses.

Registration Fee	\$ 8.00	What is This?
Air Quality Compliance Fee	\$ 0.25	What is This?
Air Quality Research Fee	\$ 1.50	What is This?
Vehicle License Tax	\$ 420.00	What is This?
Estimated Total Cost	\$ 429.75	What is This?

Figure 6. Proposed Output of Online Registration Fee Calculator

Despite the relatively low number of citations issued, Motor Vehicle Enforcement Services has proven to be a cost-effective strategy for combating the vehicle registration problem. Throughout the 2003 fiscal year, total actual expenditures for Enforcement Services were nearly \$700,000 (Appendix II). With that modest budget, Enforcement Services was able to recover approximately \$2.83 from direct revenues per dollar spent. This figure does not include the additional revenues that will come from future registrations of the more than 12,000 legally registered vehicles that resulted from active enforcement efforts (Appendix II). Using a low estimate of \$120 for an average registration cost, the 12,281 registrations obtained through the efforts of Enforcement Services could yield an additional \$1.4 million per year, indefinitely.

A cost/benefit analysis of Enforcement Services is an unusual undertaking. Rather than a typical goal of maximizing the ratio, the State of Arizona benefits most by maximizing the benefit, since obtaining legal enforcement once will continue to generate revenue. Ideally, Arizona would obtain enforcement on the entire \$25 million in violations immediately, even at a cost equal to or even slightly greater than the benefit. The reason for maximizing benefit is simply that every violator can be viewed as an annuity, providing a continuous stream of payments. For every day these payments are directed out of state, Arizona misses the chance to receive what it rightfully should.

The optimal size of Enforcement Services in the long-run would be, at most, large enough to secure registration on the estimated \$9.83 million revenue loss per year due to first-time violators. Assuming changes in revenue from enforcement efforts will be proportional to changes in budget, the largest necessary budget for the long run would be \$3.5 million, based on a previous budget of \$689,899 and revenues of \$1.952 million.

However, there are several reasons why the budget should not be that large in the long run. First, as enforcement becomes more successful, potential violators will be discouraged from attempting to violate the law in the first place, thus reducing the need for future enforcement. Second, certain costs that currently come out of the Enforcement Service budget, such as operation of the tip line, would not have to be increased proportionally in order to operate at the optimal level. A larger budget could be focused on increasing revenue generating assets, including new officers and further training. Because Enforcement Services has been changing rapidly, and numerous officer hours have recently been spent in training, it is not possible to determine precisely how effective enforcement can be, based on its current budget. Thus, it is not possible to determine the optimal number of enforcement officers at this time.

Another consideration is whether Arizona has an interest in attempting to enforce the class of violators who do not register when first moving to Arizona, but do register once their previous state's registration expires. This group accounts for the majority of the \$9.83 million of lost revenue to Arizona due to first-time violators, but is also the most difficult to enforce. Focusing on this group is not likely to be cost-effective using current techniques. Using four years as an assumed average length of time that recurring violators continue to violate, \$3.96 million of the \$9.83 million from first-time violators will carry over into recurring violations. The \$3.96 million figure is an estimate of the percentage each year of recurring violators contributes to the total expense of recurring violations, based on the assumed average length of recurring violations. For a four-year average, the number represents one-fourth the cost of recurring violations. In other words, of the \$9.83 million lost due to first-time violators, \$3.96 million of which comes from people who will continue to violate, and an estimated \$5.87 million is lost each year by one-time violators. It would be erroneous to assume the \$5.87 million could be recovered, because Arizona's residency law theoretically allows new residents to violate Arizona's requirement of immediate registration for seven months, so long as the new residents state they do not plan to remain residents for the full seven months. This results in a large proportion of the estimated \$5.87 million lost being unrecoverable from this class of violator. Further unrecoverable amounts would result from the difficulty of proving when a new resident became a resident. Although there may be a future interest in curbing this type of violation, current efforts need to focus on recurring violations, which will ultimately provide Arizona with the most revenue.

Based on these estimations and using current information, long-run revenue goals for Enforcement Services should be approximately \$3.96 million from obtaining registration compliance. The appropriate budget to achieve this goal can be determined once a proportional pattern of budget size to revenue becomes consistent. However, it is important to consider that revenue cannot be measured directly in many cases, as the true measure of the effectiveness of Enforcement Services will come in a reduction of the size of the illegal registration problem.

In the short term, Arizona has a strong interest in curbing the \$15 million in recurring violations. This is not a concern in the long run because recurring violations would be prevented with effective enforcement of first-time violations. The problem

with enforcement of this group is that it is difficult to justify increasing the size of Enforcement Services to the optimal level, since once enforcement on this group is successful there will be no need for the expanded division. Rather than temporarily increasing the size of Enforcement Services, the most realistic option will be for Enforcement Services to reach its optimal long-term revenue goal of \$3.96 million from obtaining registration compliance. This will present the image of effective enforcement to the public, which will encourage self-compliance. Also, revenues of this size will have a significant impact on reducing the number of recurring violators each year.

A large increase in the number of illegal registrations made compliant, along with the proposed fines, will enable Arizona to obtain optimal enforcement results. Increased enforcement will demonstrate to current violators that they have a high likelihood of being caught. This will supplement the proposed fine structure, which would make current violators want to avoid being caught, as opposed to the present system that financially rewards violators. The result of this combination will encourage self-compliance, which is the ideal result for the State.

From the analysis of the current situation and the options available for increasing the registration compliance rates of residents of Arizona, it has been determined that the only plausible changes to the ADOT practices in use now are rather minor. There is no way to fully remove the economic incentive for violations without restructuring tax law to reduce the VLT and increase other taxes. However, such a change in the tax code would require a two-thirds majority of both houses of the State Legislature—a very daunting hurdle to overcome. There is no way to track individuals with the detail needed to enforce the laws in a statewide action without violating the privacy rights of every resident of the State. The only true options are to increase public awareness of the use and reasons for the VLT, to alter the structure of the fines imposed on violators to make a punitive statement, to modify residency laws, and to continue and increase the current practice of roving enforcement checks. Other options are not cost-effective or are not possible in the short run, given the political and legal restrictions of the State.

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APPENDIX I: Registration Grace Period by State

States vary in their allowable grace period for new residents to complete vehicle registration. The chart below demonstrates the variation from state to state.

Table 8. Vehicle Registration Grace Period by State

State	Deadline / Grace Period			State	Deadline / Grace Period		
Alabama	Within	30	days	Montana	Within	20	days
Alaska	Within	10	days	Nebraska	Within	30	days
Arizona	Immediately	0		Nevada	Within	30	days
Arkansas	Within	30	days	New Hampshire	Within	60	days
California	Within	20	days	New Jersey	Within	60	days
Colorado	Within	30	days	New Mexico	Within	180	days
Connecticut	Within	60	days	New York	Within	30	days
Delaware	Within	60	days	North Carolina	Within	30	days
Florida	Within	10	days	North Dakota	Within	150	days
Georgia	Within	30	days	Ohio	Within	30	days
Hawaii	Within	30	days	Oklahoma	Within	30	days
Idaho	Within	90	days	Oregon	Within	30	days
Illinois	Within	30	days	Pennsylvania	Within	20	days
Indiana	Within	60	days	Rhode Island	Within	30	days
Iowa	Within	30	days	South Carolina	Within	45	days
Kansas	Within	90	days	South Dakota	Within	90	days
Kentucky	Within	30	days	Tennessee	Within	30	days
Louisiana	Within	30	days	Texas	Within	30	days
Maine	Within	30	days	Utah	Within	60	days
Maryland	Within	60	days	Vermont	Within	180	days
Massachusetts	Within	30	days	Virginia	Within	30	days
Michigan	Immediately	0		Washington	Within	30	days
Minnesota	Within	30	days	West Virginia	Within	30	days
Mississippi	Within	60	days	Wisconsin	Within	2	days
Missouri	Within	30	days	Wyoming	Within	10	days

Table 9. Breakdown of State Grace Periods for Motor Vehicle Registration

Grace Period	Number of States
0 days	2
2 days	1
10 days	3
20 days	3
30 days	26
45 days	1
60 days	8
90 days	3
150 days	1
180 days	2
44 Days	Average

APPENDIX II: Enforcement Monthly Report

The monthly report demonstrates the increasing workload and successes of current enforcement efforts.

Figure 7. 2003 Monthly Report

(On following three pages)

2003 MONTHLY REPORT		Motor Vehicle Division											
		SUBPROGRAM/AREA											
AGENCY GOAL	2	To increase the quality, timeliness and cost effectiveness of our products and services.											
MVD/PROGRAM GOAL	6	To promote the efficient generation, collection, and management of revenues to meet public needs.											
SUBPROGRAM OBJECTIVE	1	For FY 2003, establish a new baseline for revenues collected (direct and indirect)* as a result of registration compliance enforcement efforts.											

PERFORMANCE MEASURES		FY 2002	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	FY 2003	FY 2003
																Estimated
IP	Number of special request registration compliance leads	17	1	0	0	0	2	0	3	2	41	6	6	34	112	20
IP	Number of 1-800 number registration compliance leads	2,173	36	426	269	3,668	1,590	1,647	2,581	1,910	1,224	1,666	907	1,324	17,227	4,500
IP	Number of leads followed up on by enforcement staff that were generated by database letters (following the 60-day period when compliance is sought, but not obtained)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Baseline
IP	Number of leads generated by active enforcement efforts in the field	479	136	109	174	5,073	676	210	148	500	1,197	1,591	1,365	2,704	13,883	8,760
IP	Number of leads generated by all active enforcement efforts (database letters and field)	479	173	109	174	5,073	676	210	148	500	1,197	1,591	1,365	2,704	13,883	New Baseline
IP	Leads carried over from previous period	0	498	282	192	293	7,830	9,734	9,665	11,605	13,117	14,655	16,866	18,141	498	19
IP	Total leads	2,659	708	817	624	9,034	10,088	11,591	12,597	14,017	15,579	17,916	19,144	22,203	31,720	New Baseline
OP	Number of leads closed	2,171	425	625	331	1,204	354	1,726	992	900	924	1,052	1,003	2,556	12,093	New Baseline
OP	Percent of leads closed	81.3%	60.2%	76.5%	53.0%	13.3%	3.5%	14.9%	7.9%	6.4%	5.9%	5.9%	5.2%	11.5%	38.1%	New Baseline
OC	Number of closed leads resulting in compliance through registration	754	152	264	242	590	344	1,626	771	649	793	920	815	2,363	9,529	New Baseline
OP	Number of closed leads due to proof that registration is not required or where lead is unfounded	70	9	4	47	2	3	50	25	31	26	53	108	16	374	New Baseline
OC	Number of closed leads resulting in compliance through registration or proof that registration is not required	864	161	268	289	592	347	1,676	796	680	819	973	923	2,379	9,903	New Baseline
OC	Percent of closed leads resulting in compliance through registration or proof that registration is not required	39.8%	37.8%	42.9%	87.3%	49.2%	98.0%	97.1%	80.2%	75.6%	88.6%	92.5%	92.0%	93.1%	81.9%	New Baseline
OP	Number of closed leads that did not result in compliance due to exhausted lead potential	1,307	265	357	42	612	7	50	196	220	105	79	80	177	2,150	New Baseline

PERFORMANCE MEASURES	FY 2002												FY 2003	FY 2003
	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Estimated	
OC Number of leads resulting in compliance within 60 days of compliance letter or other action	363 (Based on 30 days only)	81	177	934	1,606	1,319	1,572	1,241	1,169	1,362	1,267	1,439	12,281	New Baseline
OC Number of vehicles registered within 60 days of closed leads as a result of active enforcement	363 (Based on 30 days only)	81	177	934	1,606	1,319	1,572	1,241	1,169	1,362	1,267	1,439	12,281	New Baseline
OC Direct revenues* generated from active enforcement	\$261,065	\$12,972	\$30,235	\$96,100	\$46,526	\$111,592	\$107,526	\$63,990	\$100,032	\$116,624	\$113,606	\$138,017	\$952,265	\$3.0 million
OP Number of automatically-generated database letters (identifying additional potential violators of registration compliance laws)	N/A	0	3,721	4,346	4,457	3,773	4,150	3,370	4,227	3,406	3,869	3,696	39,235	New Baseline
OC Number of vehicles registered within 60 days as a result of automatically-generated database letters being sent out	N/A	0	2	1,359	701	548	709	559	536	596	576	614	6,200	New Baseline
OC Direct revenues* generated as a result of database letters	N/A	\$0	\$62	\$178,684	\$119,551	\$97,514	\$130,051	\$86,043	\$86,586	\$99,792	\$100,107	\$101,890	\$990,691	New Baseline
OC Total direct revenues generated as a result of active enforcement efforts and database letters	N/A	\$12,972	\$30,297	\$264,784	\$166,077	\$209,506	\$227,587	\$170,033	\$186,618	\$216,416	\$213,713	\$239,907	\$1,952,976	New Baseline
OC Estimated indirect revenues* generated, indicated by inboxes in activity following media blitzes, etc.	N/A	\$970,470	\$900,382	\$3,399,371	\$4,129,737	\$319,656	\$4,361,396	\$7,626,598	\$8,212,025	\$2,768,588	\$7,912,544	\$872,338	-\$21,066,456	New Baseline
OC Total revenues generated from all indirect*	\$261,065	\$983,442	\$410,689	\$3,694,156	\$4,289,814	\$529,062	\$4,193,809	\$7,695,563	\$8,025,407	\$2,952,170	\$7,898,031	-\$952,331	-\$19,113,480	New Baseline
OC Amount of Vehicle License Tax (VLT) transferred to the General Fund on a quarterly basis	N/A	\$1,378,945		\$4,202,001									\$0	New Baseline
OP Actual expenditures - Org 2540 and 2650 (appropriation to supplement)	N/A	\$734	\$0	\$10,787	\$57,507	\$54,437	\$44,845	\$74,361	\$45,386	\$94,761	\$97,042	\$160,590	\$640,440	New Baseline
OP Actual expenditures - Org 2390 (base)	N/A	\$7,255	\$5,697	\$5,394	\$5,048	\$3,936	\$1,687	\$2,370	\$2,536	\$3,411	\$0	\$4,209	\$49,459	New Baseline
OP Total actual expenditures	N/A	\$6,431	\$7,915	\$16,181	\$62,555	\$58,373	\$46,532	\$76,731	\$47,922	\$98,172	\$97,042	\$164,799	\$689,899	New Baseline
OP Approximate revenues collected for every dollar spent on registration compliance enforcement (based on direct revenues only)	N/A	\$2.08	\$3.83	\$16.36	\$2.65	\$3.59	\$4.89	\$2.22	\$3.89	\$2.20	\$2.20	\$1.46	\$2.83	New Baseline
OP Average revenues collected per vehicle registered (based on direct revenues only)	\$302	\$160	\$169	\$115	\$72	\$112	\$100	\$94	\$109	\$109	\$115	\$117	\$106	New Baseline
OP Number of officer hours spent on registration compliance field activities	749	76	240	957	690	2,059	1,677	1,370	2,217	2,572	2,344	2,193	16,597	New Baseline
OP Number of officer hours spent in court	0	2	0	0	0	0	6	1	14	8	4	1	37	New Baseline
OP Number of officer hours spent in training	0	0	40	80	551	50	606	1,208	129	9	6	5	2,665	New Baseline
OP Number of officer hours spent on registration compliance administrative duties	0	0	0	160	40	40	52	20	93	77	31	17	531	New Baseline
OP Total number of officer hours	749	80	280	1,197	1,281	2,189	2,341	2,599	2,453	2,667	2,385	2,217	19,849	New Baseline

PERFORMANCE MEASURES		FY 2002	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	FY 2003	FY 2003
																Estimated
OP	Number of compliance letters sent as part of active enforcement efforts	748	107	49	174	53	275	857	1,147	857	736	746	688	836	6,625	8,760
OP	Number of warnings given	479	136	128	170	5,073	676	210	148	500	1,066	1,591	1,197	1,368	12,763	8,760
OP	Number of citations given	4	2	0	1	2	2	3	79	28	76	20	80	3	296	876

VARIANCE STATEMENT

JULY: This is the first month for tracking this objective. A variance statement will be offered next month.

AUGUST: Increased number of cases closed resulted from activity in prior fiscal year, but in excess of sixty day limit. Officer assigned to Registration Compliance detail was on leave for two weeks during August. Additional officer will be assigned to the program effective 8/9/2002. Large increase in 1-800 complaints noted; however, no call campaigns were launched and no other reason for the increase is identified. Of the 426 calls received, 350 did not provide sufficient information to initiate an investigation. The call system will be reevaluated to determine if a different set of options may help obtain better information. The computer-generated letter program was activated at the end of the month and will begin operation in September.

SEPTEMBER: Average VLT for vehicles registered was higher than the average of the last two months, so while counts of vehicles decreased, revenues increased. The decrease in closed leads appears to be linked to the decreased supply of fresh and viable 1-800 leads. Provisions have been made to assign 10 officers to Registration Compliance details effective October 3, 2002.

OCTOBER: Ten officers were assigned to the registration compliance effort, which effort began with a media blitz, resulting in a large volume of 1-800 leads, the issuance of 5,073 warnings for expired and/or out-of-state registrations, and the highest number of closed leads resulting in registration compliance to date.

NOVEMBER: Pronounced increases in both October and November are attributed to a full-scale media campaign and intensive efforts of newly assigned staff. Although warnings written in November dropped significantly from October (5,073 to 676), estimated indirect revenues increased from \$3.4 to \$4.1 million in the same period, most likely due to concern among residents that enforcement actions would be taken against them unless their vehicles were registered. Direct revenues and warnings issued decreased during November, as officers completed 561 hours of training in an effort to maintain certain certifications.

DECEMBER: Significant decreases in indirect revenues are believed to be due to the state of the economy, which may have affected spending on new vehicles in comparison with the same period last year, thereby impacting comparative registration increases as well. However, active enforcement efforts during the same period increased direct revenues to \$112,245, the highest amount thus far. Closed leads also increased to 1,626. Time spent in CVSA training in November impacted new December leads, however, as evidenced by the issuance of fewer warnings in comparison with November (876 to 210).

JANUARY: Seven officers were in training at the AZ POST Academy (scheduled to be completed 2-28-03). Those officers not required to be in training followed up on leads, closing 962; however, of those, 196 were closed due to exhausted lead potential. As was observed in December, dramatic decreases in indirect revenues are believed to be due to the state of the economy, which may have affected spending on new vehicles in comparison with the same period last year. In addition, the immediacy of resident concern for registration non-compliance may be weakening somewhat, either because vehicles have recently been registered, or because the threat of having enforcement actions taken against them is not compelling.

FEBRUARY: The drop in indirect revenues can be partly attributed to the registration of 33,140 fewer vehicles in February 2003, as compared with February 2002. Collected VLT also decreased by \$4.41 million during the same comparative period.

MARCH: The drop in indirect revenues can be partly attributed to the registration of 43,818 fewer vehicles in March 2003, as compared with March 2002. Collected VLT also decreased by \$6.55 million during the same comparative period.

APRIL: While still negative, April's indirect revenues improved by \$5.5 million over March. In addition, while the number of April 2002 registrations decreased by approximately 37,000 from 2001 levels (383,600 to 345,700), revenues actually increased by \$700,000 for the same period (\$63.4 million to \$54.1 million). Thus, the average VLT per vehicle is higher than last year, indicating that newer vehicles are being registered. Possible reasons for this revenue increase include: (1) consumers taking advantage of car dealer incentives; (2) gradual improvements in consumer confidence since February, especially with the subsidizing of major combat operations in Iraq in mid-April; (3) decreases in registrations of trailers over 10,000 lbs. due to a permanent registration law that took effect in December 2001; and (4) increased and sustained efforts of Registration Compliance officers. Direct revenue attributed to registration compliance efforts also attained its highest level of the year at \$116,216.

MAY: Indirect revenue lost its April momentum. Revenue collected from direct enforcement efforts dropped slightly to \$113,606. An additional 2,259 vehicles were registered during May 2003 in comparison with May 2002. (Comparisons of the two periods show that biannual registrations were approximately 30,000 higher, while annual registrations dropped nearly 28,000.) The average VLT dropped \$2.00 per vehicle registered from May 2003 to May 2002. The possibility of obtaining additional data through programming to help draw conclusions about changes in registration counts and revenues is being pursued.

JUNE: An additional 8,600 vehicles were registered during June 2003 in comparison with June 2002; however, the average VLT dropped \$1.00 per vehicle for the same period. Special programming to help draw conclusions about changes in registration counts and revenue data has been requested. Revenue collected from direct enforcement efforts increased to its highest point for the year, totaling nearly \$137,000.

APPENDIX III: Arizona Population Growth and General Demographics

Table 10. Arizona Population Growth

Arizona Population					
Location	1990 Population	2000 Population	10 Year Growth Rate	Average Yearly Rate	Slope
Total Arizona	3,665,228	5,130,632	39.98%	4.00%	$y = 1E+06x + 2E+06$
Maricopa County	2,122,101	3,072,149	44.77%	4.48%	$y = 950048x + 1E+06$
Other Counties	1,543,127	2,058,483	33.40%	3.34%	
Maricopa As % Total	57.90%	59.88%			
1990-2000 Delta	1,465,404				

A. Arizona General Demographics

Table 11. Year 2000 Arizona General Demographics

Subject	Number	Percent
Total population	5,130,632	100
SEX AND AGE		
Male	2,561,057	49.9
Female	2,569,575	50.1
Under 5 years	382,386	7.5
5 to 9 years	389,869	7.6
10 to 14 years	378,211	7.4
15 to 19 years	367,722	7.2
20 to 24 years	362,860	7.1
25 to 34 years	742,665	14.5
35 to 44 years	768,804	15
45 to 54 years	627,904	12.2
55 to 59 years	238,675	4.7
60 to 64 years	203,697	4
65 to 74 years	363,841	7.1
75 to 84 years	235,473	4.6
85 years and over	68,525	1.3
Median age (years)	34.2	(X)
18 years and over	3,763,685	73.4
Male	1,859,746	36.2
Female	1,903,939	37.1
21 years and over	3,536,279	68.9
62 years and over	787,520	15.3
65 years and over	667,839	13
Male	296,267	5.8
Female	371,572	7.2

RELATIONSHIP		
Total population	5,130,632	100
In households	5,020,782	97.9
Householder	1,901,327	37.1
Spouse	986,303	19.2
Child	1,496,034	29.2
Own child under 18 years	1,197,438	23.3
Other relatives	319,414	6.2
Under 18 years	132,782	2.6
Nonrelatives	317,704	6.2
Unmarried partner	118,196	2.3
In group quarters	109,850	2.1
Institutionalized population	63,768	1.2
Noninstitutionalized population	46,082	0.9
HOUSEHOLDS BY TYPE		
Total households	1,901,327	100
Family households (families)	1,287,367	67.7
With own children under 18 years	608,218	32
Married-couple family	986,303	51.9
With own children under 18 years	428,878	22.6
Female householder, no husband present	210,781	11.1
With own children under 18 years	129,511	6.8
Nonfamily households	613,960	32.3
Householder living alone	472,006	24.8
Householder 65 years and over	162,822	8.6
Households with individuals under 18 years	673,926	35.4
Households with individuals 65 years and over	465,062	24.5
Average household size	2.64	(X)
Average family size	3.18	(X)
HOUSING OCCUPANCY		
Total housing units	2,189,189	100
Occupied housing units	1,901,327	86.9
Vacant housing units	287,862	13.1
For seasonal, recreational, or occasional use	141,965	6.5
Homeowner vacancy rate (percent)	2.1	(X)
Rental vacancy rate (percent)	9.2	(X)
HOUSING TENURE		
Occupied housing units	1,901,327	100
Owner-occupied housing units	1,293,556	68
Renter-occupied housing units	607,771	32
Average household size of owner-occupied unit	2.69	(X)

Average household size of renter-occupied unit	2.53	(X)
	Number	Percent
Subject		
(X) Not applicable		
¹ Other Asian alone, or two or more Asian categories.		
² Other Pacific Islander alone, or two or more Native Hawaiian and Other Pacific Islander categories.		
³ In combination with one or more other races listed. The six numbers may add to more than the total population and the six percentages may add to more than 100 percent because individuals may report more than one race.		
Source: U.S. Census Bureau, Census 2000 Summary File 1, Matrices P1, P3, P4, P8, P9, P12, P13, P17, P18, P19, P20, P23, P27, P28, P33, PCT5, PCT8, PCT11, PCT15, H1, H3, H4, H5, H11, and H12.		

Table 12. Year 1990 Arizona General Demographics

Subject	Number
Total population	3,665,228
SEX	
Male	1,810,691
Female	1,854,537
AGE	
Under 5 years	292,859
5 to 17 years	688,260
18 to 20 years	172,063
21 to 24 years	220,617
25 to 44 years	1,163,607
45 to 54 years	349,516
55 to 59 years	146,658
60 to 64 years	152,874
65 to 74 years	290,044
75 to 84 years	151,013
85 years and over	37,717
Under 18 years	981,119
65 years and over	478,774
HOUSEHOLDS BY TYPE	
Total households	1,368,843
Family households (families)	940,106
Married-couple families	747,806
Other family, male householder	49,980
Other family, female householder	142,320

Nonfamily households	428,737
Householder living alone	337,681
Householder 65 years and over	119,287
Persons living in households	3,584,545
Persons per household	2.62
Total housing units	1,659,430
OCCUPANCY AND TENURE	
Occupied housing units	1,368,843
Owner occupied	878,561
Renter occupied	490,282
Vacant housing units	290,587
For seasonal, recreational, or occasional use	96,104
Homeowner vacancy rate	3.6
Rental vacancy rate	15.3
Persons per owner-occupied unit	2.71
Persons per renter-occupied unit	2.46
Units with over 1 person per room	101,636
(X) Not applicable	
Source: U.S. Bureau of the Census, 1990 Census of Population and Housing, Summary Tape File 1 (100% Data)	
Matrices P1, P3, P5, P6, P8, P11, P15, P16, P23, H1, H2, H3, H5, H8, H10, H18A, H21, H23, H23B, H32, H32B, H41.	

APPENDIX IV: Maricopa County General Demographics

Table 13. Year 2000 Maricopa County General Demographics

Subject	Number	Percent
Total population	3,072,149	100
SEX AND AGE		
Male	1,536,473	50
Female	1,535,676	50
Under 5 years	241,974	7.9
5 to 9 years	238,222	7.8
10 to 14 years	222,056	7.2
15 to 19 years	214,672	7
20 to 24 years	224,444	7.3
25 to 34 years	488,329	15.9
35 to 44 years	475,907	15.5
45 to 54 years	366,464	11.9
55 to 59 years	133,812	4.4
60 to 64 years	107,290	3.5
65 to 74 years	188,816	6.1
75 to 84 years	130,036	4.2
85 years and over	40,127	1.3
Median age (years)	33	(X)
18 years and over	2,244,146	73
Male	1,111,401	36.2
Female	1,132,745	36.9
21 years and over	2,110,157	68.7
62 years and over	421,289	13.7
65 years and over	358,979	11.7
Male	154,462	5
Female	204,517	6.7
HOUSING OCCUPANCY		
Total housing units	1,250,231	100
Occupied housing units	1,132,886	90.6
Vacant housing units	117,345	9.4
For seasonal, recreational, or occasional use	49,584	4
Homeowner vacancy rate (percent)	1.8	(X)
Rental vacancy rate (percent)	8.7	(X)
HOUSING TENURE		

Occupied housing units	1,132,886	100
Owner-occupied housing units	764,547	67.5
Renter-occupied housing units	368,339	32.5
Average household size of owner-occupied unit	2.74	(X)
Average household size of renter-occupied unit	2.54	(X)
Source: U.S. Census Bureau, Census 2000 Summary File 1, Matrices P1, P3, P4, P8, P9, P12, P13, P17, P18, P19, P20, P23, P27, P28, P33, PCT5, PCT8, PCT11, PCT15, H1, H3, H4, H5, H11, and H12.		

Table 14. Year 1990 Maricopa County General Demographics

Subject	Number
Total population	2,122,101
SEX	
Male	1,045,778
Female	1,076,323
AGE	
Under 5 years	170,182
5 to 17 years	385,609
18 to 20 years	96,004
21 to 24 years	130,982
25 to 44 years	707,846
45 to 54 years	203,880
55 to 59 years	80,724
60 to 64 years	81,617
65 to 74 years	156,627
75 to 84 years	86,482
85 years and over	22,148
Under 18 years	555,791
65 years and over	265,257
OCCUPANCY AND TENURE	
Occupied housing units	807,560
Owner occupied	511,242
Renter occupied	296,318
Vacant housing units	144,481
For seasonal, recreational, or occasional use	38,486
Homeowner vacancy rate	3.8
Rental vacancy rate	16.8

Source: U.S. Bureau of the Census, 1990 Census of Population and Housing, Summary Tape File 1 (100% Data) Matrices P1, P3, P5, P6, P8, P11, P15, P16, P23, H1, H2, H3, H5, H8, H10, H18A, H21, H23, H23B, H32, H32B, H41.

APPENDIX V: Arizona Summary

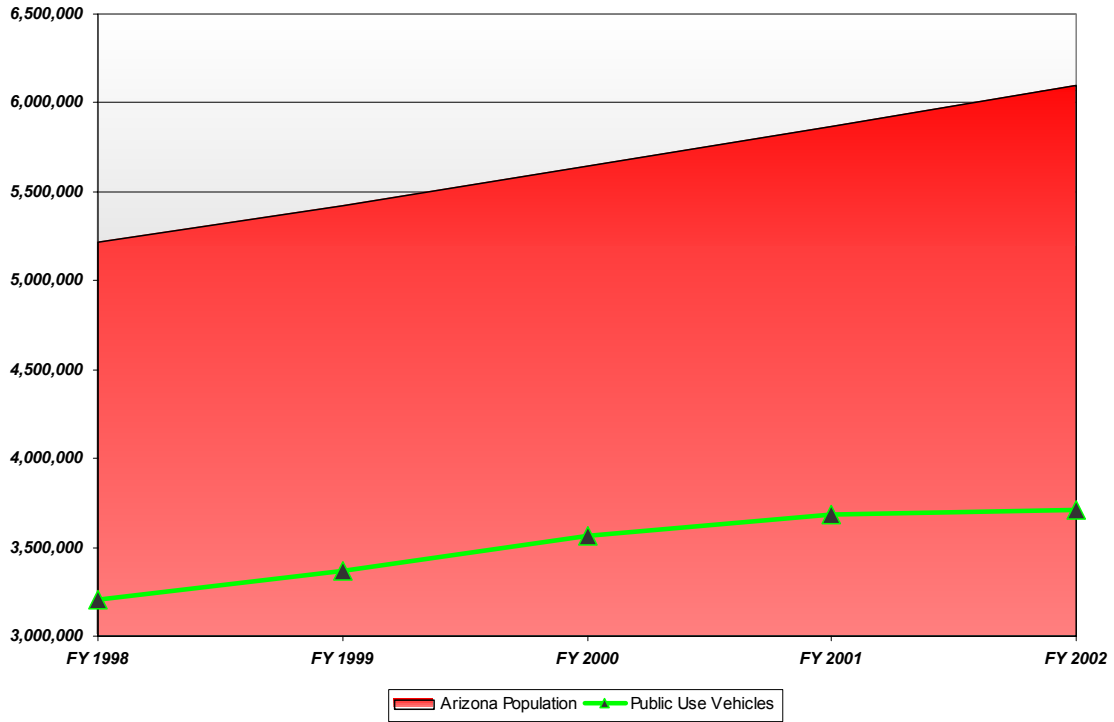


Figure 8. Arizona Population to Vehicle Registration Growth Rates

Table 15. Arizona Population and Vehicle Registration Growth Rates

Arizona Population					
Location	1990 Population	2000 Population	10 Year Growth Rate	Average Yearly Rate	Slope
Total Arizona	3,665,228	5,130,632	39.98%	4.00%	$y = 1E+06x + 2E+06$
Maricopa County	2,122,101	3,072,149	44.77%	4.48%	$y = 950048x + 1E+06$
Other Counties	1,543,127	2,058,483	33.40%	3.34%	
Maricopa As % Total	57.90%	59.88%			
1990-2000 Delta	1,465,404				
Vehicle Registrations					
	FY 1998	% Change	FY 1999	% Change	FY 2000
Public Use Vehicles	3209527	5%	3367456	6%	3567449
	FY 2001	% Change	FY 2002	% Change	
Public Use Vehicles	3686916	0.55%	3707116	2.37%	
Average Yearly Change	3.69%	Slope	$y = 131464x + 3E+06$		

APPENDIX VI: CALIFORNIA SUMMARY OF DATA

Table 16. California Summary of Data

California Population					
Total population (2000)	33,871,648				
Total population (1990)	29,760,021				
Delta	4,679,687				
10 Year Growth Rate	13.82%				
1 Year Growth Rate	1.38%				
Az Population Growth Rate	3.998%				
Ca Population Growth Rate	1.382%				
Delta	289.38%	Arizona's growth rate is 3 time greater than California's			
Az Pop Delta	1,465,404				
As % of Ca	31.31%	Arizona had 31% of the growth of California with only 10% of the population			
Az Pop as % of Ca 1990	12.32%				
Az Pop as % of Ca 2000	15.15%				
2000 Arizona Population	5,130,632				
1990 Arizona Population	3,665,228				
Migration Rates					
California 1990-96	50,000				
Arizona 1990-96	200,000				
Per Capita Migration Rates		Rate per thousand			
Ca	0.001571545	1.572			
Az	0.04547594	45.476			
Az Rate a % of Ca Rate	2894%				
Az Ca Multiplier	28.94	Arizona's net migration rate is 29 times larger than California's			
Number of Improperly Registered Vehicles Per 1000 People					
California	10				
Arizona	36				