

Assigned Vehicle Program



PIMA COUNTY
SHERIFF'S
DEPARTMENT

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Introduction

The Pima County Sheriff's Department first implemented the Assigned Vehicle Program in 1979 after an exhaustive 14-month study. This report updates the many benefits that the Department continues to realize with the program. Benefits—such as force multiplier, lower operating costs, and increased vehicle longevity—continue to be important considerations with the program. In addition, with the increased emphasis on coordinated and quick response of resources, critical event preparedness, homeland security, and terrorism, the flexibility this program offers unquestionably enhances the Department's ability to respond in a crisis.



Background

Prior to 1979, patrol vehicles for the Pima County Sheriff's Department were managed through a pool system. Unlike most jurisdictions that implemented an assigned vehicle program, the Sheriff's Department's proposal was an outgrowth of a study undertaken to solve severe vehicle-related operational problems.

Under the pool system, numerous areas of concern were identified which necessitated a change:

1. The Department was experiencing serious operational problems resulting from inadequacies of the vehicle fleet;
2. There were not a sufficient number of vehicles to effectively and efficiently meet service demands and perform required duties;
3. High rates of vehicle malfunction and failure exacerbated the difficulties resulting from an inadequate fleet;
4. A vehicle that malfunctioned in the field rendered the deputy "out of service"; and impacted three (3) shifts each day it was "out of service";
5. Most functions performed by the Department were, and still are, totally dependent on the availability and condition of vehicles; and
6. Law enforcement requires mobility and flexibility of operation within large geographic areas.

As a result of these concerns, a study was conducted to research causes and propose solutions. An exhaustive 14-month effort, which analyzed vehicle use, policies, patterns, maintenance procedures, and vehicle performance

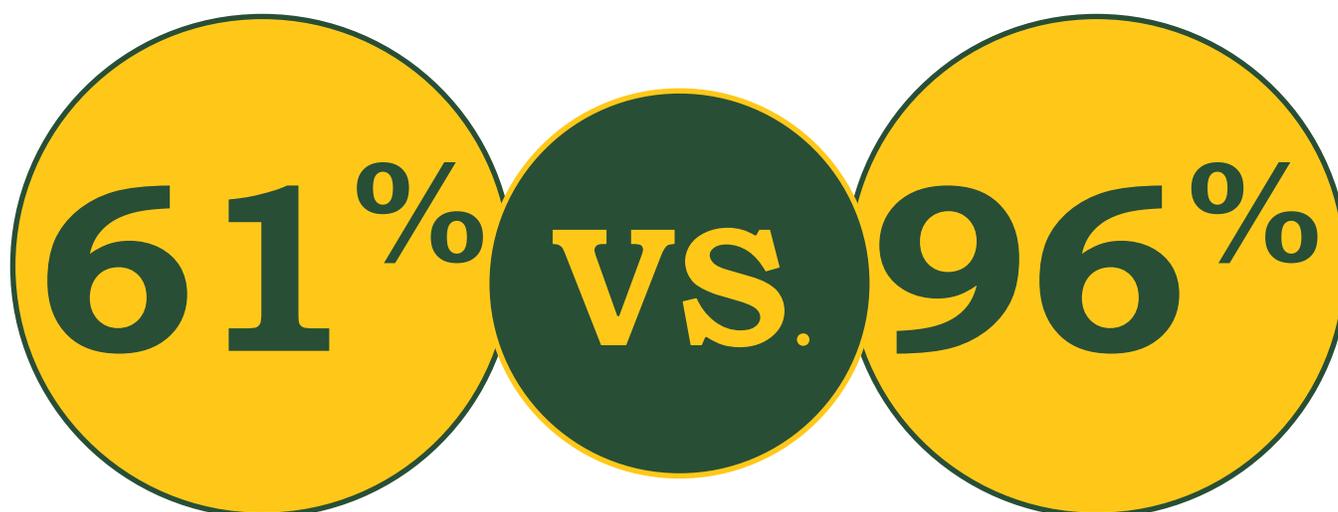
comparisons, was undertaken. Vehicle use data was obtained from files maintained by the Sheriff's Department's Fleet Management. An analysis of the vehicle performance data revealed marked patrol units were out of service, due to malfunction, an average of 3.4 days for every 1,351 miles driven. Calculated on an annual basis, any patrol vehicle would be unavailable for use in excess of 141 days (306 shifts) over the life of the vehicle. Based upon life expectancy, patrol vehicles would be unavailable for duty due to malfunction approximately 39% of their anticipated life.

At the same time, an analysis was performed on records for unmarked vehicles which, due to specific assignment and type of usage, were similar to an assigned vehicle program.

Unmarked units had a life expectancy of 4.3 years with an average of 15 out-of-service days per year for maintenance; this equated to only 4% of their anticipated life. Consequently, the study concluded that an Assigned Vehicle Program, based upon maintenance alone, would be justified.

Pool Vehicle Availability

Unmarked Vehicle Availability



The study also showed that individually assigned unmarked vehicles were not subject to the rigorous demands of around-the-clock use. As a result, the unmarked units accumulated mileage much more slowly than the marked units. Vehicles that acquired excessive mileage in short periods of time under stressful driving conditions were found to experience a greater frequency of malfunction and probability for serious malfunction than vehicles operating under less stressful conditions. As expected, high mileage vehicles require more maintenance than vehicles with lower mileage.

Other factors unique to pool operations were also found to contribute to the high maintenance factor. A pool vehicle resulted in poor driver accountability due to multiple drivers utilizing the same vehicle. Pool vehicles, when utilized by a large and transitory number of drivers, were subject to less attention and care than assigned vehicles.

Assigned vehicles were found to have decreased maintenance costs due to increased driver accountability.

The study also showed that individual vehicle assignment programs were originally designed by state-wide law enforcement agencies to facilitate response in emergency call out situations. The geography of large jurisdictions, such as Pima County (9,200 square miles), made reporting to centralized locations to pick-up a patrol vehicle impractical and inefficient. With an assigned patrol vehicle program, deputies could be ready for duty and dispatch once they were in their vehicle. Individual vehicle assignment was designed as a force multiplier to maximize the effectiveness of a finite number of law enforcement officers. It was anticipated that this would result in added flexibility and capacity. The Pima County Sheriff's Department currently has only 1.42 officers per thousand population; this is well below other local law enforcement agencies and significantly lower than the national average of 2.5. Departments with a pool program were limited to the number of pool vehicles available for responding to large scale emergencies. The capability to respond to any given emergency, whether short-term or long-term in duration, is substantially enhanced with an assigned vehicle program.

Additionally, the study found that several jurisdictions reported activity by off-duty officers was a significant unexpected benefit. Off-duty utilization (while travelling to and from work assignments) of patrol vehicles resulted in increased levels of law enforcement activity; and again, effectively a force multiplier. The Pima County Sheriff's Department's

experience with an Assigned Vehicle Program reinforces this finding, even with significant off-duty use restrictions. The use of individually assigned vehicles is limited to travel to and from the deputy's duty assignment, travel to and from required court appearances, and other sanctioned Department activities. Other uses, including travel for general off-duty employment, are prohibited.





As a result of the study, the Pima County Sheriff's Department began assigning vehicles to commissioned personnel. The rationale for and benefits of the Assigned Vehicle Program are:

- Increased police presence
- Improved patrol shift transitions
- Improved operational mobility and flexibility
- Improved emergency response and control
- Improved command and control
- Increased vehicle longevity
- Lower operating cost per mile
- Less down time for maintenance
- Lower collision rates

According to 2007 Law Enforcement Management Statistics, compiled by U.S. Department of Justice, Bureau of Justice Statistics, 93% of sheriff's departments around the country allow personnel to take Department vehicles home; of those agencies, 25% allow for personal use of Department vehicles.

As previously stated, the use of Sheriff's Department assigned vehicles is limited to official business only. This report reviews the rationale proposed and adopted from the original study regarding the benefits of an Assigned Vehicle Program and not only reaffirms the effectiveness, but its validity in the 21st century as well.

Program Benefits





Increased Vehicle Longevity

The most striking result of the Assigned Vehicle Program has been increased vehicle longevity. The average life expectancy of an assigned vehicle is approximately seven (7) years. Under the pool system previously utilized by the Sheriff's Department, the average life expectancy of a patrol vehicle was 1.7 years. This is a 312% increase in the useful life of a vehicle.

**“The Assigned Vehicle Program has
increased vehicle life by 312%”**

This same outcome has been experienced by other law enforcement agencies with similar vehicle programs. A 2007 the Manatee County (FL) Sheriff's Department study found the life expectancy of a patrol car used in a pool program was just 1.8 years. This increased to five (5) years when patrol cars were used in an Assigned Vehicle Program. A 2007 analysis by the St. Petersburg (FL) Police Department found pooled patrol cars lasted three (3) years while assigned patrol cars were roadworthy for 8 years. The Hampton (VA) Police Department increased its vehicle life expectancy from three (3) years, under a pool program, to more than eight (8) years with an assigned vehicle program. The Arlington (TX) Police Department increased its vehicle life expectancy from three (3) to six (6) years (taken from a 2003 study). The Tacoma (WA) Police Department (2004 analysis) increased its vehicle life expectancy from two (2) years to seven (7).

This dramatic increase in vehicle life can be directly attributed to the reduced time the vehicle is in use and the improved care and treatment an assigned vehicle receives. Under this program, patrol units are no longer subjected to prolonged, intense, and stressful driving conditions. Increased consistency in driver performance has resulted in decreased required maintenance. The prolonged service life continues to be an indispensable element of the Pima County Sheriff's Department's Assigned Vehicle Program.



Operating Costs

There is significant evidence to show operating costs for assigned vehicles are substantially less than pool systems.

Examples of jurisdictions that have decreased their operating costs by adopting an assigned vehicle program:

- In September 2010, a City of Cape Coral (FL) study concluded an Assigned Vehicle Program was most cost effective in the short term (1 year), near future (3 years), and the longer term (7years)
- A 2007 study by the City of St. Petersburg (FL) found the cost per mile to operate patrol cars in a pool program was \$0.49 compared to a cost of \$0.40 per mile for assigned vehicles. This savings amounted to \$7,650 per vehicle over the course of its life expectancy.
- In 2007 the Manatee (FL) County Sheriff's Office reported a savings of \$0.17 per mile when comparing assigned vehicles to pool vehicles, totaling nearly \$15,000 over the life of each vehicle.
- In 2006, the Galloway Township (NJ) Police fleet manager reported a transition form an Assigned Vehicle Program to a pool system would nearly double operating costs from \$130,000 to \$228,000.
- Since 1999, the Daytona Beach (FL) Police Department has reported its Assigned Vehicle Program has reduced maintenance costs 40%.
- The Kansas City (MO) Police Department has saved \$.05 per mile to operate assigned vehicles versus the same make and model in regular pool service.
- The Visalia (CA) personalized patrol vehicle program has realized a savings of more than 31% as compared to a conventional patrol vehicle program.
- The Arlington (TX) Police Department projected a \$5,413 savings per vehicle in the first year of its assigned vehicle program.
- A Law and Order study showed annual maintenance cost for a pool vehicle was \$2,305 and only \$523 annually for a personally assigned vehicle. This is a savings of 77.31% per vehicle.
- In 2004, the Tacoma (WA) Police Department's operating costs were reduced by 33.86% after switching from a pool program to an assigned vehicle program.

A U.S. Department of Justice study concluded Assigned Vehicle Programs are more cost effective than pool arrangements. In fact, the study reported the operating costs for a large city department was estimated to drop 30% upon conversion to an assigned vehicle program. All of these facts support the cost effectiveness of the Pima County Sheriff's Department's Assigned Vehicle Program.

A pool program would also see a possible increase in insurance costs, as personally-owned vehicles would be used to respond to call-outs from home to pick-up a Department vehicle. The deputy is considered on duty once called out.

In 2013, the cost of a new, fully-equipped, marked patrol vehicle is approximately \$47,000. Over the projected life of an assigned patrol vehicle, the Department would replace a "pool" vehicle three (3) times, at a projected cost of \$141,000 (not taking into account inflation). This is a cost savings of \$94,000 for just one vehicle.

Maintenance

The Assigned Vehicle Program encourages deputies to have maintenance performed on their regularly scheduled days off. This ensures that some of the vehicle's down time is during a period when the vehicle is not in use, thus decreasing the amount of "down time" and costs to the Department. Unscheduled maintenance has some impact, but not nearly to the degree experienced under a pool program. In the original study, the average down time for a marked patrol unit was 3.4 days and 3.2 days for an unmarked unit per maintenance episode.

In 2012, the average down time for maintenance was only one day per episode or 5 days annually.

“ In 2011, vehicle's were available 98.6% of the time. ”

Tacoma, Washington found they were paying higher repair costs, on pool vehicles, because the warranties expired after two (2) years due to excessive mileage.

Force Multiplier

Increased police presence gained by instituting an Assigned Vehicle Program is determined by the increased amount of time law enforcement personnel are actually driving their Department vehicle. For example, an officer's average daily commute is 30 minutes, each way, or one (1) hour per day. If the daily commute is accomplished in a Department vehicle, individual officer availability increases by 260 hours annually, or 138,320 hours Department-wide; which is the equivalent to almost 67 full-time deputy sheriffs. These "free hours" of additional law enforcement presence and protection equate to more than \$5.5 million annually, using a median hourly wage of \$40.14 (\$25.09 salary + \$15.05 EREs).



During these daily commutes, deputies are obligated to monitor the department radio and assist in various types of activities including public service (traffic accidents, public assists, point control), emergency backup (assist on-duty officers, emergency call response), and other types of law enforcement. A law enforcement survey showed that commissioned personnel average two (2) traffic responses weekly during their commute. This equates to thousands of additional law enforcement responses annually. A Tacoma (WA) Police Department study showed officers averaged three (3) "contacts" per month on their way to/from work while off-duty.

This increased police presence also saves many on-duty hours of deputy sheriff response. An example of this would be if a deputy is dispatched to an outlying area in response to a traffic hazard. Frequently, because officers are commuting to or from their assigned duty location or a court appearance, they

are already in the area or are closer to the call location than the assigned patrol vehicle. These officers can then handle the call without having to add additional mileage. This not only saves the original unit the unnecessary mileage but also frees them up to handle other, perhaps more important, calls for service.

Additionally, the parking of assigned vehicles at the officers' homes expands the law enforcement presence in Pima County. Neighborhood Watch groups and Home Owners' Associations support having law enforcement vehicles parked in their neighborhoods. The marked and semi-marked vehicles provide a visible symbol that discourages criminal activity and provides an important sense of security for citizens. A pool program offers none of these advantages.



Improved Patrol Shift Transitions

The Assigned Vehicle Program has a positive impact on shift changes. Deputies no longer have to compensate for the “dead” time required to swap out equipment and vehicles from one shift to the next. Deputies remain in service, in their assigned beat, until relief is effectively on duty in the area.

Furthermore, this program ensures that beats are not abandoned during shift change, as is necessary under a traditional “pool” system. As a result, unnecessary delays in patrol response are virtually eliminated. Prior to the assigned vehicle implementation, time was wasted on: the on-duty deputy driving to the station; the two (2) deputies checking the condition of the vehicle; loading and unloading equipment; and, the relieving deputy driving to the beat area. (Types of equipment loaded: rifle, shotgun, drug test kit, flares, first aid kit, personal protective equipment, nightstick, tape recorder, flashlight, camera, evidence bags, computer, briefcase, etc.) Changeover now occurs in the field, without the need to exchange vehicles, thereby eliminating the previous shortcomings.

A 2007 report by the Manatee (FL) County Sheriff's Office concluded a pool vehicle program would—at a minimum—result in a loss of forty (40) minutes per deputy per day to accomplish loading and unloading of gear, vehicle inspections, and car preparation. This increased the cost per pool vehicle by \$7,900 in lost deputy work time.

Today, every deputy reports to work in a clean vehicle with a full tank of fuel. Limited duty time is spent on routine maintenance. Additionally, because deputies always have the necessary equipment with them in the assigned vehicle, they are able to assist and provide additional coverage should they encounter an accident or crime scene while traveling to and from any work-related activity.

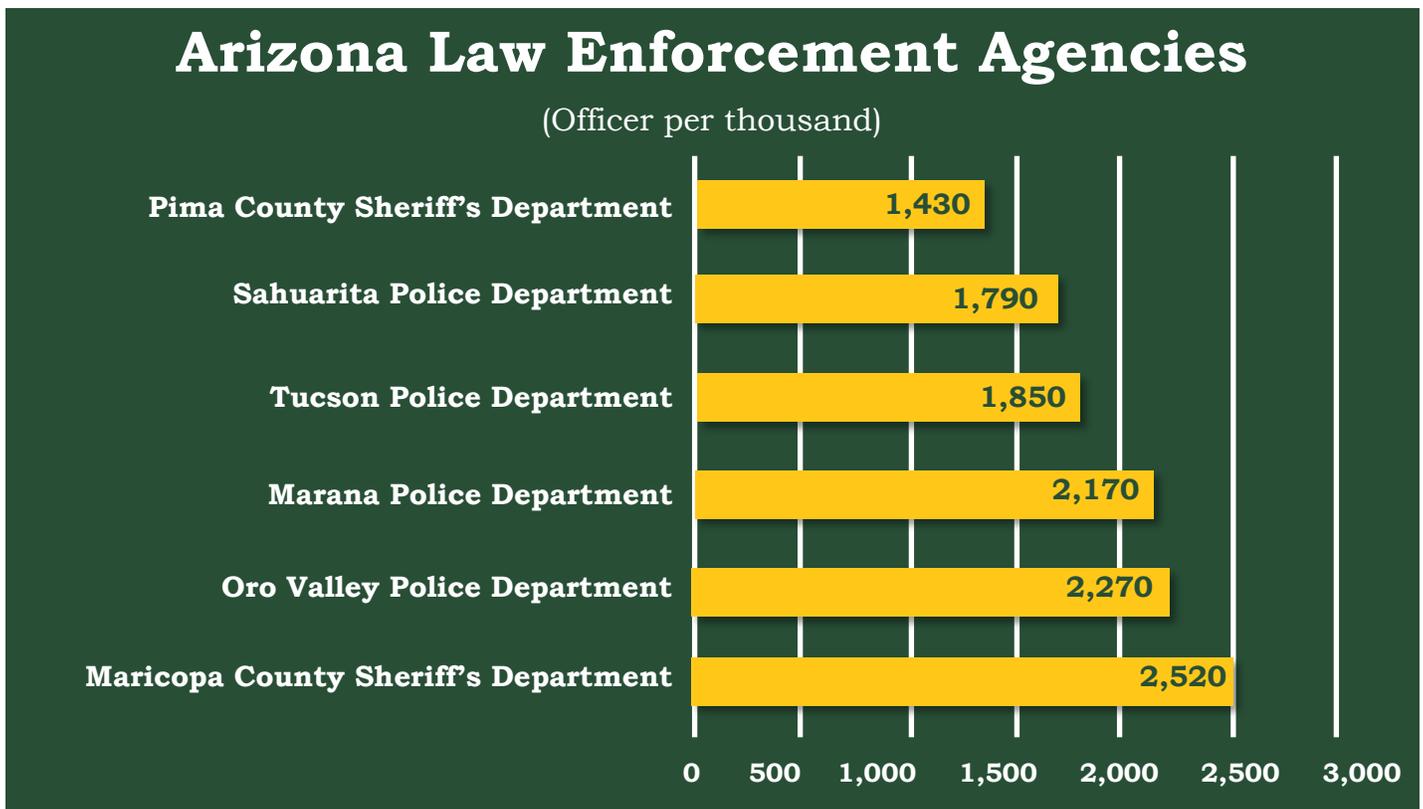
**44,530 HOURS
SAVED ANNUALLY**
(based on 122 patrol shifts
at \$40.14 per hour)

Overtime savings is also realized by assigning calls received at shift change to the oncoming deputy. Prior to the assigned vehicle program, occasions frequently arose in which no deputies were available to respond to a priority call except the off-going shift. Because of the nature of the call, the deputies who should have been off-duty had to respond to the call and handle it until the oncoming shift could locate pool vehicles and respond to the scene. This resulted in ineffective and inefficient use of extremely limited resources. The study estimated that transition time wasted approximately 24,500 on-duty hours, which equates to approximately 11 full-time deputy sheriffs.

Today, with approximately 122 patrol shifts each day, and considering at least a one-hour transition period per shift, approximately 44,530 hours are saved annually at a cost of nearly \$1.8 million. (Figure calculated using a median wage of \$40.14 per hour.) This equates to 19 full-time deputy sheriffs.

Improved Operational Mobility and Flexibility

Of the major law enforcement agencies within Arizona, the Pima County Sheriff’s Department has one of the lowest officer per population ratios. Currently, the Pima County Sheriff’s Department has 1.42 deputies per thousand population. In comparison, the Maricopa County Sheriff’s Department has 2.52 officers per thousand, the Oro Valley Police Department has 2.43 officers per thousand, the Marana Police Department has 2.37 officers per thousand, the Tucson Police Department has 1.87 officers per thousand, and Sahuarita Police Department has 2.12 officers per thousand population. The national average, according to F.B.I. statistics, is 2.5 officers per thousand for all law enforcement organizations and 2.7 per thousand for Sheriff’s Departments.



In September 2013, the Department employed 532 commissioned deputies. It is estimated that by the year 2015, with a projected service population of 404,240, in order to achieve an acceptable ratio of 1.75 deputies per thousand the Department would have to staff 707 deputies or an increase of 175 deputies over the present work force. By 2020, the predicted Pima County population will be 439,085 requiring 768 deputies, an increase of 236 deputies.

“ Pima County Service Population is 361,454 with a projected service population of 394,085 by the year 2020. ”

In the face of this personnel deficit, it is obvious one of the only reasons the Department has been able to provide minimally acceptable service to the residents of Pima County is, in large part, the Assigned Vehicle Program. To overcome the officer per thousand deficit, the Department relies on the operational flexibility of its entire staff through the Assigned Vehicle Program.

As an example, the ability to deploy squads from S.W.A.T., Search and Rescue, Border Interdiction, Homicide, Robbery/Assault, Canine, Special Operations, and many other specialized units, without delay for lack of vehicles, often makes the difference between minutes and hours to respond. Incidents such as a lost child in the wilderness or a severely injured hiker in rough terrain require an intense, coordinated effort of numerous Sheriff's personnel, volunteers, vehicles, and aircraft. This coordination begins the moment an incident is reported and is dependent on an immediate response which is afforded by an assigned vehicle. Other critical incidents, such as a barricaded subject or mass shooting necessitating a S.W.A.T. response, also hinge on an instantaneous emergency response that only an assigned vehicle can provide.

An Assigned Vehicle Program also provides the advantage of equipping vehicles with specialized equipment that would be impractical to load and unload on a daily basis such as certified bomb technicians. The responsibilities of the position include responding to all incidents where an explosive

device may be located. The specialty equipment is stored in the deputy's personally assigned vehicle on a permanent basis, ready for call-out service. The advantage of equipment accessibility is a major determinant of success or failure. Other examples include S.W.A.T., Search and Rescue, Border Crimes personnel, Homicide detectives, and Traffic investigators.

The Assigned Vehicle Program also serves as a “force multiplier,” not only for deputies, but commanders as well. Greater service is achieved by all commissioned officers with assigned vehicles. Without assigned vehicles, flexibility would be seriously hindered and the need for increased staffing would be unavoidable. One commander can oversee multiple Districts, as the assigned vehicle provides flexibility in movement; any commander can be immediately dispatched to an emergency anywhere in the County. This provides immediate and efficient over-sight of personnel.

The cost of increasing personnel levels would far outweigh any benefit or reduction that might be gained through elimination of the Assigned Vehicle Program. To increase the current commissioned ratio to an acceptable level of 1.75 deputies per thousand, which would be the minimum necessary in order to offset the loss of the Assigned Vehicle Program and would still be only halfway to the national average, it would be necessary to immediately hire 100 officers to bring the staffing level up to 618 officers. This equates to a staggering \$11.2 million initial cost and \$6.5 million annually.



More Effective Emergency & Critical Incident Response

The Sheriff's Department must plan and be prepared for emergencies, i.e., natural disasters, riots at detention facilities (federal, state, and county), major aircraft accidents, strikes, civil disturbances, and the threat of terrorist incidents. Although these major emergencies may be infrequent, Pima County would be severely criticized if not prepared. In a jurisdiction that covers more than 9,200 square miles, the need for quick and efficient emergency response is critical.



A recent example of this was the January 8, 2011, shooting in which six (6) people were killed and thirteen (13) wounded including United States House Representative Gabrielle Giffords. The scope of this incident quickly overwhelmed on-duty deputies that Saturday morning. However, additional off-duty resources were quickly called to the scene, including senior command level personnel that arrived in less than 40 minutes. This quick response by off-duty resources allowed for a structured Incident Command plan, led by senior commanders, which enabled quick coordination with the media, stabilization of the scene, evacuation of the injured, the identification of a large number of witnesses, and efficient scene perimeter and traffic control plans. Much of this would have been very difficult without the ability to quickly move off-duty resources to the scene. In addition, the ability to continue to provide law enforcement services to the remainder of Pima County was enhanced by assigning some on-coming personnel directly to



other Patrol Districts to fill the voids created by the needs at the scene; this helped to provide continuity of services to all citizens of Pima County.

Other major incidents that have occurred in past years include the Gary Triano car bomb at La Paloma Resort in 1996, the 1997 and 2000 Fourth Avenue Riots, the 2000 “Y2K” Liberty Shield Plan, the terrorist attacks of September 11th, the 2002 Bullock and 2003 Aspen fires on Mt. Lemmon, the closure of Sabino Canyon in 2004 due to mountain lions, the 2005 Florida Fire in Madera Canyon, the summer floods in 2005, and in June of 2008, Nick Delich went on a cross-town shooting-spree wounding three (3) PCSD deputies and killing TPD Officer Erik Hite. All are examples of incidents in which the need for a quick and efficient sustained response was needed and in which the Pima County Sheriff’s Department deployed literally dozens of personnel within hours. The handling of these events would have provided severe challenges had it not been for the ability to deploy fully-equipped off-duty personnel quickly.

Not only are emergency deployments more effective, but the success of sustained operations, some which last for months, is equally dependent on assigned vehicles. In fact, many operations that require sustained assignment of multiple personnel would be impossible under a pool program. As previously explained, a pool program limits the response and type of response to the number of vehicles readily available. Pima County’s *Mass Disaster Plan* is predicated on the Sheriff’s Department’s rapid response utilizing an assigned vehicle program.

With all commissioned officers participating in the Assigned Vehicle Program, the Sheriff’s Department has the ability to deploy as many deputies as may be necessary to control any emergency. With a work force of only 1.42 officers per thousand population, far below the national average, the Department does not have the luxury to further limit a disadvantaged force of officers.

As the population continues to move into the “rural” unincorporated parts of Pima County, the Sheriff’s Department is continually confronted with increases in demand for services. This makes it even more difficult to maintain the necessary degree of readiness to respond to emergencies unless a high level of mobility is maintained. As previously stated, this type of assigned vehicle program was originally designed by state-wide law enforcement agencies to facilitate response in emergency call-out situations. The geography of large jurisdictions makes reporting to a centralized location impractical and inefficient. Pima County, over 9,200 square miles, makes this argument a reality.

**2016: 131,434 CALLS FOR SERVICE
COUNTY WIDE RESPONSE TIME AVERAGE OF**

ONLY 6 MINUTES



Homeland Security

Effective command and control determine the success of an operation. The Sheriff depends on command/supervisory staff to carry out this important function. All members of the command/supervisory staff, whether they are assigned to operational or administrative functions, are trained in the National Incident Management System (NIMS) and Incident Command System (ICS). NIMS and ICS are organizational models for managing emergency situations and are dependent on the command and control provided by ranking officers. Commanders and supervisors continually receive training in NIMS and ICS. In addition to normal duties, commanders are utilized in ICS for command and control at major incidents, whenever and wherever they occur. The Department believes this is a cost-effective utilization of command personnel and negates the need for additional commanders.

Compared to the Maricopa County Sheriff's Department, the most comparable law enforcement agency in Arizona, the Pima County Sheriff's Department has a lower ratio of command personnel. The management span of control in the Pima County Sheriff's Department is approximately two times greater than that of the Maricopa County Sheriff's Department.

The Pima County Sheriff's Department's Assigned Vehicle Program allows commanders to be available 24 hours a day. Sheriff's command personnel live throughout the community. The diverse availability of commanders allows the Department to deploy command officers to incidents quickly wherever and whenever the event may be, without the restriction of obtaining a pool vehicle. This effective and efficient use of command personnel is a primary reason why the Department is able to maintain a larger span of control than its counterpart.

Lower Accident Rate

The Risk Management Annual Report immediately following implementation of the Assigned Vehicle Program indicated the program had a positive impact on employee driving behavior (individual familiarity with the buttons, switches, and handling of one patrol unit). Although the number of accidents increased from 71 to 118; the severity of accidents decreased significantly. A partial explanation for the increase is due to the accountability afforded by the personally assigned vehicle program. Prior to implementation of the program, a vehicle could sustain numerous minor dents, dings, and other damage without being reported. After implementation, any incident or damage was reported, regardless of how minor. Consequently, collision repair costs decreased from an average of \$377.15 per accident to \$148.05 per accident. Collision repair costs decreased 34.8 percent.

The Tacoma (WA) Police Department study reported major accident incidents for the assigned vehicle program was 84% less than the pool program.

Accident rates for the Pima County Sheriff's Department have been consistently lower than the national average; almost half of the national average. In FY11/12, Department vehicles were driven a total of 7,925,922 miles; rate of accidents was 13.57 per million miles traveled; preventable accidents were 7.82 per million miles. According to an International Association of Chiefs of Police study, the national average was 25.3 accidents per million miles driven and preventable accident rate of 9.2 per million miles.

	ACCIDENT RATE PER MILLION MILES:	
	National Average - 9.2	Pima County - 5.6
	PREVENTABLE ACCIDENT RATE PER MILLION MILES:	
	National Average - 21.3	Pima County - 11.6

While it is recognized that there is always room for improvement, the Assigned Vehicle Program has minimized accident liability. The Department's good driving behavior is also reinforced by aggressive defensive and pursuit driving training provided to all commissioned personnel. Additionally, the Department implemented a more comprehensive traffic accident and disciplinary program that contributes to improved driving behavior.

Price of Parking

A further consideration in the use of a pooled vehicle program is the added expense of necessary parking. A South-west Florida Center for Public and Social Policy evaluation completed by Dr. Howard Smith and Dr. Margaret Banyan identified the logistical and financial issues related to the parking necessary to transition from an Assigned Vehicle Program to a pooled vehicle approach. Such a transition would require approximately 3.5 parking spaces per the maximum number of deputies on duty at any given time. This approach takes into account the need for a space for each in-use patrol car, a space for the on-duty deputy's personal vehicle, a space for the oncoming deputy's personal vehicle, and additional spaces (factor of 0.5) for additional pool vehicles needed as replacements to accommodate maintenance or otherwise out of service patrol cars.

The program analysis concluded a space requirement of approximately 300-350 square feet per parking space translating to approximately 100-150 spaces per acre. The construction cost of these parking spaces ranged from \$5,000 for a surface lot to \$25,000 per space for a parking structure. Such a parking structure would be needed in instances where additional real estate is not owned nor could be acquired by the County to expand parking facilities. Additionally, the annual maintenance including cleaning and resurfacing ranged from \$200 to \$800 per space.

A quick analysis of just the six (6) Patrol District Facilities reveals a shortage of parking and the high cost of building and maintaining necessary parking accommodations. The following table analyzes the parking needs of each district and the cost using the minimum price cited in the study for both construction and maintenance.

DISTRICT	DEPUTIES	REQUIRED PARKING	CURRENT PARKING	ADDITIONAL REQUIRED	MINIMUM COST OF CONSTRUCTION	MINIMUM ANNUAL MAINTENANCE
Ajo	18	63	6	57	\$285,000	\$12,600.00
Foothills	75	263	29	234	\$1,170,00.00	\$52,600.00
Green Valley	28	98	22	76	\$380,000.00	\$19,600.00
Rincon	62	217	25	192	\$960,000.00	\$43,400.00
San Xavier	77	270	47	223	\$1,115,000.00	\$54,000.00
Tucson Mountain	17	60	10	50	\$250,000.00	\$5,000.00
Costs					\$4,160,000.00	\$187,200.00

The minimum cost to provide adequate parking at department district offices would be over \$1.3 million excluding the cost of acquiring any necessary real estate. Recurring costs of \$80,000 to \$320,000 would be realized for annual maintenance.

Further challenges could make this transition even more costly. For example, the Rincon District parking lot is surrounded by other developed commercial property and dedicated roadways with no on-street parking thus preventing the expansion of the District's current footprint. To overcome such challenges, the construction of a parking structure at the much higher rate of \$25,000 per space could drive the cost of renovation for this location alone to nearly \$1 million.



Conclusion

The Assigned Vehicle Program has proven to be cost effective and essential to providing quality law enforcement and public safety services to the citizens of Pima County. With the program, increased law enforcement services are provided without additional costs, maintenance expenditures have decreased, and vehicles are lasting longer. The program inherently increases law enforcement visibility, flexibility, and deployment of personnel within Pima County. These factors are important benefits for the Department to effectively and efficiently respond to critical incidents in the community – be it natural disasters, civil unrest, criminal activity, or terrorism events – with the level of staffing currently available. The quick and immediate response to the 2008 cross-town shooting spree and January 8th incidents are prime examples.

Returning to a pool program would be an ineffective and inefficient use of resources and would likely result in a cost increase to the Department and the County. For example, the Department would incur increased personnel costs of approximately \$15 million in the form of hiring 100 additional deputy sheriffs to compensate for the lost mobility and flexibility of the Assigned Vehicle Program. This would, by necessity, include additional supervisory and command

personnel as the Department would no longer be able to maintain the increased span of control currently possible under the Assigned Vehicle Program.

While some savings under a pool program may be perceived from the elimination of commute costs, that savings is minimal when compared to the additional service and protection received. The average daily commute for each officer is twenty (20) miles with a real dollar cost of approximately \$18.20. This \$18.20 is contrasted by the average of one (1) hour of additional availability, or “free” law enforcement coverage, provided by each officer (518) every duty day. This increased availability translates into 138,320 additional hours of law enforcement coverage annually, equivalent to almost 65 deputy sheriffs. These “free hours” of law enforcement service far outweigh the minimal cost of daily travel. The Tacoma (WA) Police Department concluded that an assigned vehicle program is preferable to a pool program if as little as five (5) minutes are saved per officer per day.





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