

Vallejo Police Department

A Problem Oriented and Evidence-Based Policing Project to Combat Motor Vehicle Theft- The Evidence of Intervention in Vallejo, California



Author:

Lt. Jason Potts



May 31st 2019

Summary

This project explores the various interventions employed & lessons learned to combat motor-vehicle theft during two Christmas holiday seasons in a high-density shopping center in Vallejo, California. We discuss unique officer-led strategies rooted in problem-oriented & evidence-based policing concepts. To accomplish this project, we partnered with our crime analyst & a non-profit research organization out of New York University, BetaGov.

Our crime analyst identified a significant increase in auto theft related crime in 2016. As a result, we implemented a quasi-experimental design (before & after analysis) in our first season (2017). We tested enforcement & deterrence components in a campaign coined "HideItLockItTakeIt." Strategies tested included the presence of crime awareness flyers & electronic billboards used to communicate crime awareness to the public, unoccupied police cars, surveillance, social/local media postings, and increased focused - "Holiday Patrol." Also included, was the use of GPS bait devices placed inside locked undercover cars & hidden cameras.

For the first year (2017), deterrence methods were statistically significant & associated with fewer auto burglaries ($p < 0.05$). Police-citizen contacts were a strong predictor of less motor vehicle theft (MVT) ($p < 0.05$). The combined deterrence methods corresponded with a 40% drop in 2017 auto burglaries from the same time-period in 2016. This drop is a notable finding since the number of car burglaries in 2017 was higher than in 2016, leading up to this campaign (Potts, 2018).

In the second holiday season (2018), a randomized controlled trial (RCT) design was utilized to investigate the effectiveness of our intervention and prevention efforts. We tested

code-2 police lights (flashing blue, red, & amber lights) for deterring crime in the same shopping area. The “*lights on*” (intervention) and “*lights off*” (control) conditions were randomized by each day of a 34-day study. Two officers in police cars were assigned to the shopping center each day on overtime shifts. We measured auto theft, auto burglary, & arrests, as well as Department of Motor Vehicle (DMV) registration checks and citizen contacts. The results: the “*lights on*” condition resulted in 6 total motor vehicle crimes compared to 12 for “*lights off*” – approaching statistical significance of ($p < 0.07$). Notably, we observed zero MVTs when the lights were on compared to 4 when the lights were off ($p < 0.03$). Finally, we evaluated increased police activity in the hotspot via DMV registration checks, & this correlated to less MVT – corroborating the importance of hotspot activity.

Motor Vehicle Theft – Holiday Seasons 2017 and 2018

SCANNING

Problem

The City of Vallejo, in California, is located between Oakland & Sacramento in the San Francisco Bay Area (SFBA). Vallejo has a population of approximately 122,293, & a total land area of 49 square miles. According to a 2012 report by Brown University, Vallejo was the most diverse cities in the United States (Lee, Iceland, and Sharp, 2012). Vallejo celebrates diversity, but the municipality also has its challenges. In 2016, a report by the OJP Diagnostic Center showed that it had the second highest violent crime rate in the State of California for its population size (OJP Diagnostic Center, 2017; McKinley, 2008).

As in many other communities, theft from auto is a widespread problem. According to FBI UCR stats for 2016, the city of Vallejo had one of the highest rates of burglary and theft

in California for a municipality its size. In 2016, the police department saw 983 incidents per 100,000. Although not as severe a problem as San Francisco, which had the highest rate of any major Californian city, the problem was growing, with an 11% increase in 2016. Adding to the challenges, is that Vallejo is ranked as one of the most dangerous cities in California as the police force shrunk from about 160 to 77 officers when the city filed bankruptcy in 2008 (Sernoffsky & Alexander, 2015). Crime escalated, 9-1-1 calls involving violence were triaged, and the relationship between police and residents began to be negatively impacted. However, in recent years, we increased engagement in the community. Examples outlined in the project show the agency’s propensity for progressive thinking through research-based behavior, community engagement, and strong leadership.

Today, the department employs 108 sworn personnel, approximately 56 of those in patrol. Embracing research and evidence-based policing (EBP) has allowed our agency to expand our efforts in a data-driven and efficient way while providing quality service to our community despite limited resources and personnel. Figure 1 illustrates our challenges:



Figure 1. Reproduced from Sernoffsky & Alexander, 2015.

ANALYSIS

To pinpoint hotspots in our city, we partnered with a BetaGov case manager, a statistician, and our crime analyst. We ran multiple queries of our records management system (RMS) for all MVTs and as a result, identified the Vallejo Plaza Shopping Center as a significant hotspot for MVTs. We also reviewed police reports and talked to tenured patrol officers, as well as confidential informants.

Research shows that crime is geographically concentrated. Some studies suggest that over 50% of all crime in a city occurs at just 3-5% of addresses and street blocks (Koper, Egge, & Lum, 2015). Further, traditional approaches, such as random patrol have generally been ineffective (Kelling et al., 1974; Sherman, 1989; Sherman, 2013). Motivated by the case of place research, which asserts if officers could approach hot places as an investigator aims to solve a criminal case - by looking at crime patterns, linked persons, and groups, then policing may be able to provide a measurable impact on crime. With this in mind, we focused specifically on the location, time, and method by which we would enforce and deter specific MVT events in our high-density shopping center hotspot for 2017 & 2018. (Koper, Egge, & Lum, 2015; Lum & Koper, 2017).

Data showed that crime was spiking in 2016 as thieves preyed on citizens and tourists visiting the Vallejo Plaza area. Thieves targeted iPhones, electronic devices, and other high-value items. Through police reports & interviews, we identified that victims were leaving purses, bags, & luggage in plain view - especially when shopping or visiting from out of town.

After talking to informants and other agencies such as Oakland PD, we discovered that criminal groups from their city were targeting victims in the SFBA. They were using personal

hotspot finders or WiFi locators on their smartphones to locate electronic devices emitting a signal. Other groups were still using the traditional method of casing parking lots, looking for rental cars (indicating tourists) and bags in plain view, and then breaking or “bipping” the windows. Adding to the challenges of catching them in the act, was that surveillance video showed that these thieves were often in and out in 30 seconds or less (Appendix E, Illustration 1, 2, 17 & 18).

Our crime analyst analyzed where and when MVT occurred in the Vallejo Plaza Shopping Center and to what frequency (see Fig. 2 & Appendix C, Heat Map 3).

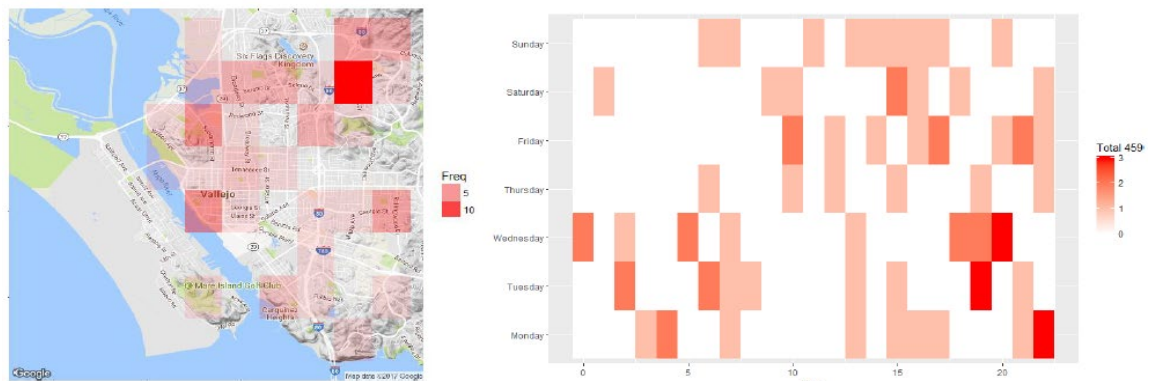


Figure 2. Heat maps of MVT in Vallejo, CA for 2017. Derived from mapping reports of Auto Burglary or Theft from Auto. A) MVT by geography. B) MVT by Day and Time. Darker colors indicate greater activity.

Our analyst discovered that 69 MVTs occurred in 2017 early in the holiday shopping season. The majority were occurring in shopping areas. Fig. 2 demonstrates the regions of Gateway Plaza, *Vallejo Plaza Shopping Center (hotspot)*, and Georgia Plaza were hardest hit (see also Appendix C, Heat Maps 1, 2, and 5).

- **Suspects:**

We had limited subject descriptions, but the ones we did, were associated with rental cars - Chevrolet Cruz, a Porsche SUV, BMW, or vehicles with paper plates (based on CCTV). Armed with this information, we initially conducted an enforcement phase to target these 3-5% of people who were committing most of the crime.

- **Victims:**

Unsuspecting shoppers or visitors from out of town – typically driving rental cars (indicating tourists). The victims were prone to leaving shopping bags or luggage recklessly displayed in a car, occasionally containing items emitting Bluetooth or Wi-Fi signals. Often after a long day of shopping and frequently while parked at the movie theater lot.

- **Timeframe:**

Primarily Mondays, Tuesdays, and Wednesdays from 6pm to 7am.

Predicting Thefts

A BetaGov statistician conducted our analysis for both years. For 2017, we predicted whether the number of thefts was dependent upon the number of citizen contacts (FIs), parking and traffic citations, month and day of the week, GPS bait devices, electronic bulletin board, and crime awareness flyers. The statistician used general linear modeling to analyze the data.

The result: citizen contacts were statistically significant in reducing thefts ($p < 0.05$, See Fig. 3 and Table 6). Also, there was a substantial decrease in thefts in December, as compared to the November baseline ($p < 0.01$, Table 6).

Our data analyst also conducted a correlation coefficient analysis. The days on which there were more police/citizen contacts demonstrated a positive correlation with fewer MVTs and more arrests. This outcome was expected because research has shown increased police/citizen contacts suppresses crime in localized areas (Boydston, 1975; Cordner, 1981).

We included GPS bait devices, electronic bulletin board, and flyers as additional predictive variables. We wanted to see if they had a statistically significant impact on thefts (See Fig. 3 and Table 6). Field interrogations (FIs) were statistically significant in reducing

thefts in this model, as well ($p < 0.05$, Table 6). Thefts also significantly decreased in December as mentioned above ($p < 0.05$, Table 6) (See Fig. 3 and Chart 3 below).

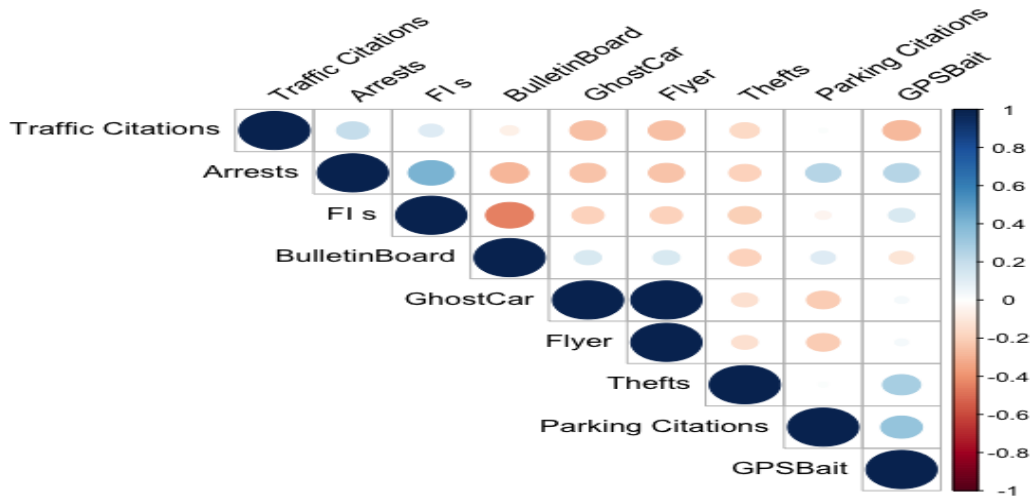


Figure 3. Shows the correlation between the variables of Arrests, FI's, Traffic Citations, Parking Citations, Thefts, GPS Bait, Flyers, Bulletin Board Ads and Ghost Car (unoccupied police cars). **Blue depicts a positive correlation and red depicts a negative correlation.** The correlation coefficient is proportional to the size of the circle & intensity of the color. **Thefts were negatively correlated with FI's, Arrests, Traffic Citations, Bulletin Board Ads, Flyers and Ghost Cars.** Arrests were positively correlated with Traffic and Parking Citations, FI's and GPS Bait.

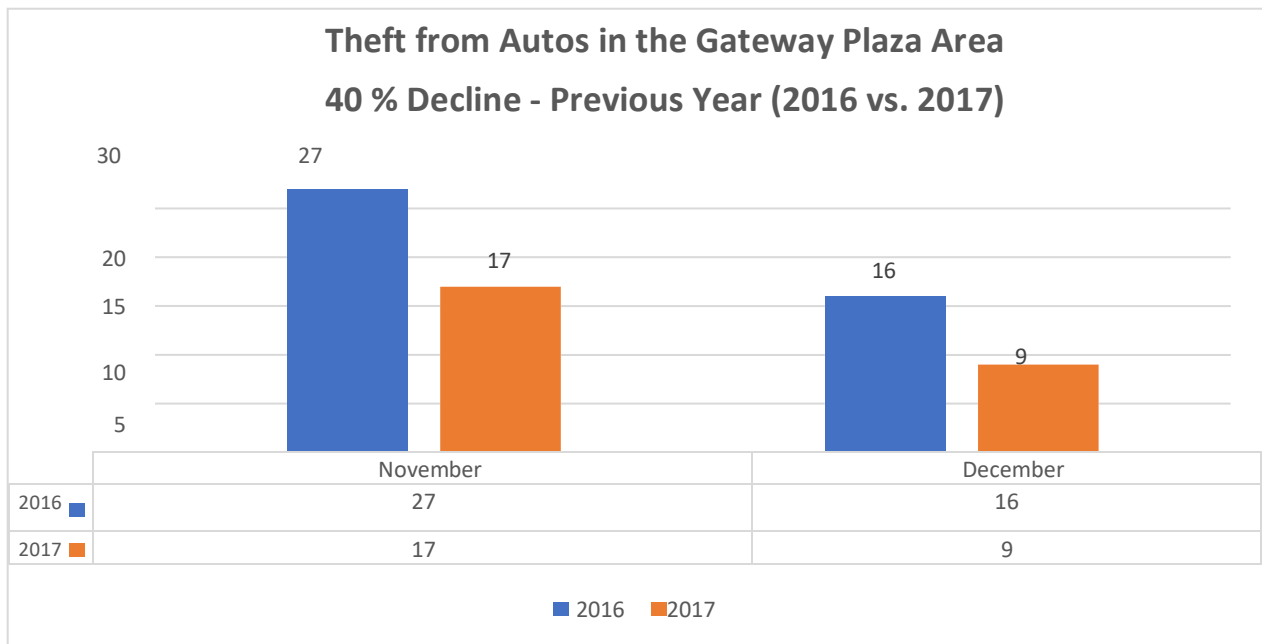


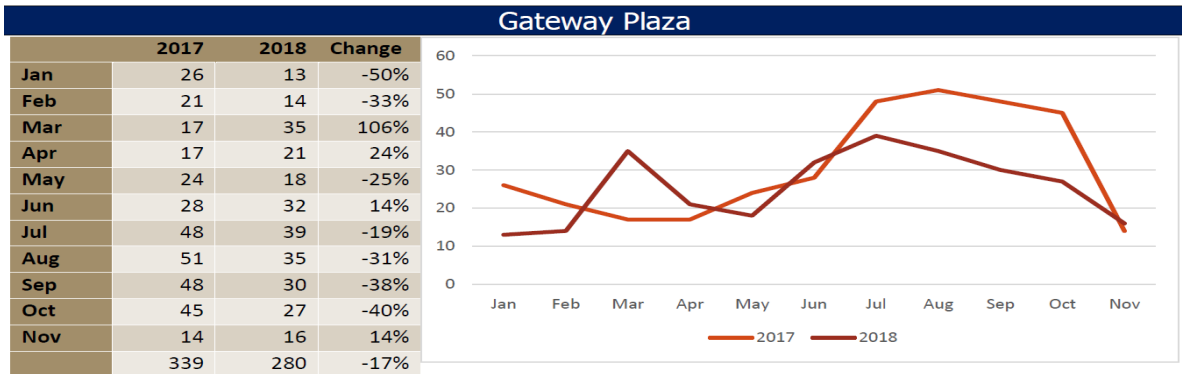
Figure 4. 2017 illustrating the 40% decline from the previous year

Theft Deterrence Strategies (2017)

For 2017, deterrence methods were statistically significant and associated with fewer auto burglaries ($p < 0.05$), which are discussed below. We analyzed the activity of hotspot activity by officers & discovered that citizen contacts (FIs) were a strong predictor of MVT outcomes ($p < 0.05$). Further, the combined deterrence methods corresponded with a 40% drop in 2017 auto burglaries from the same period in 2016 – an important finding since the number of MVT in 2017 was higher than in 2016 leading up to this campaign. However, there may have been some displacement of crime. MVT for 2018 decreased during the year in our intervention area but increased throughout the city.

RCT Outcomes and Analyses (2018)

Despite good results, one drawback to the initial pilot for 2017 was the cost. Additionally, we were unable to identify with any specificity which intervention worked as we were unable to isolate or compare it to the business as usual. To address this, the following year in 2018, we attempted to deter MVT by increasing our presence and making it more uncomfortable to commit crime. Thus, we began an initiative by implementing an RCT and comparing the data to flashing police *lights on* versus the *lights off* days. (We discuss this later in the subsequent sections). We wanted to test whether prevention would outweigh enforcement, and more importantly whether it would be beneficial. RCTs are considered the gold standard in scientific methodology (Sherman, 2013). They are methodology designs used to compare the counterfactual (what would have happened at the same time as the intervention- but often not done, and thus not discovered) (Potts, 2019).



The above is a year over year comparison of burglaries of automobiles at the Gateway Plaza located in the City of Vallejo. Data range compared is January 1st through November 23rd.

Figure 5. 2018-2017 comparison of MVT in Vallejo Plaza Shopping Center leading up to the project

In 2018, we discovered that the *lights on* condition resulted in 6 total motor vehicle crimes compared to 12 for *lights off*– approaching statistical significance ($p < 0.07$) & a 50% decline. Primary outcomes included thefts from autos and auto thefts.

These outcomes may be due to the fact that the *lights on* condition may change officer behavior. We looked at secondary data, which included arrests & objective data such as DMV registration checks. We noticed a correlation between reduced crime and increased DMV registration checks, but due to the limited power in our study (only 34-days), this requires further analysis.

	All MV crimes		Theft from Auto	
	Off	On	Off	On
sum	9	3	6	3
mean	0.5	0.2	0.4	0.2
std	0.5	0.4	0.5	0.4
min	0	0	0	0
25%	0	0	0	0
50%	1	0	0	0
75%	1	0	1	0
max	1	1	1	1
p-value ⁵	0.03		0.26	

Figure 6. RCT (2018)– General statistics for all motor vehicle crimes including theft from auto (auto burglaries) and auto thefts or (grand theft auto). Columns for all MVT represent *Lights on* and *Lights off* conditions. * $p < .05$.

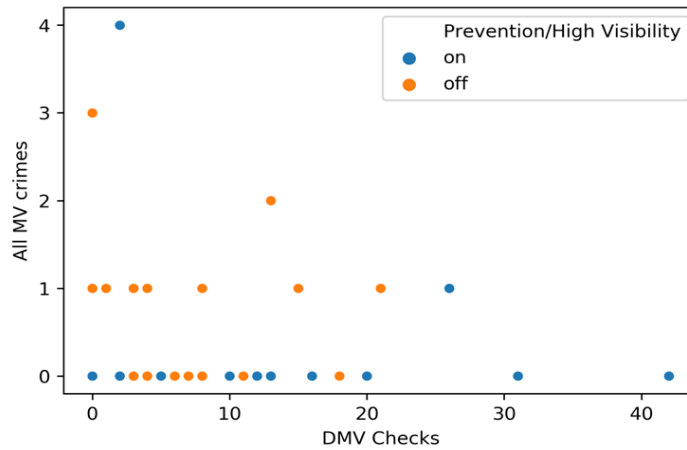


Figure 7. RCT 2018 Correlation plot – increased DMV registration checks led to fewer MVTs

	Lights On (n=17)	Lights Off (n=17)	P value	Percentage
Total auto crimes	6	12	0.07	- 50 %
Total auto thefts	0	4	0.03	- 400 %
Total auto burglaries	6	8	0.4	- 25%
Daily average Vehicle registration checks	12.5	7.4	0.12	41%
Daily average Arrests	0.8	0.4	0.2	
Daily average Citizen contacts	3.9	3.7	0.8	

Figure 8. RCT 2018 Outcomes - Lights On versus Lights Off deterrence assessment

Results for 2017 and 2018

Black Friday to 28 Dec		
	Thefts from Auto	Auto-Theft
2016	22	6
2017	19	4
2018	24	6

Auto Burglaries in Vallejo Plaza Shopping Center Day after Thanksgiving to 28 December – 13% decrease from 2016 to 2017
21% increase from 2017 to 2018

8 Nov to 28 Dec			
	Arrests	Thefts from Auto	Auto-Theft
2015	-	33	5
2016	-	44	6
2017	21	25	4
5 out of the 21 arrests were directly the result of the GPS bait technology – where a firearm and other stolen property recovered			
2018	18	28	9

Auto Burglaries in Vallejo Plaza Shopping Center 8 November to 28 December –

*40% decrease from 2016 to 2017
*Zero auto thefts during lights on condition-
despite 55% increase - previous year 2017**

Figure 9. Results for the last 3 years in the Vallejo Plaza Shopping Center for specific periods

RESPONSE

Deter or Enforce

In 2017, we conducted a quasi-experiment (comparative data for hot places and hot times) to test theft deterrent strategies in a multitude of interventions. In 2018, to address the rash of burglaries & thefts during the holidays, we conducted a study to test the efficacy of running police cars with code-2 *lights on* or *off* to prevent MVT.

In 2017, we aimed to lower MVTs in the Vallejo Plaza Shopping Center, by implementing multiple phases requiring enforcement and deterrence components (outlined below). However, in 2018, our focus was on crime prevention. Our goal that year was to test the deterrent effects of code-2 lights (flashing blue, red, & amber lights) on MVT by creating an uncomfortable environment for criminals to commit MVT while increasing the perception of increased police presence (Appendix E, Illustrations 15 & 16). We conducted a 34-day RCT to isolate/compare the intervention (lights on) with the business as usual (lights off). The 34-days were equally randomized to a “lights on” or “lights off” condition. For both years, we used patrol officers on overtime details.

Enforcement

For the first phase of 2017, we conducted enforcement. Three weeks before our focused "Holiday Patrol" (8 November - 24 November) our Crime Reduction Team (CRT) focused on hotspot data provided by our crime analyst. We utilized GPS bait device trackers, hidden cameras, & undercover officers on surveillance. Initially, we left our GPS bait devices inside power tools and computer boxes, which were left out overnight during weekend shifts & monitored 24-hours a day by GPS Bait, LLC. We made five arrests of frequently arrested motor vehicle thieves through surveillance and GPS bait. However, there were a few challenges with the technology outlined below:

Limitations

- Related to GPS, thieves were scanning with "5.0" / police apps & fled almost every instance – resulting in pursuits when dispatch communication may have indicated they were being followed.
- Many of our subjects were seemingly from out of town (based on arrest & field interrogation data). Often, they would immediately drive onto the freeway (with limited turns – making it difficult to ascertain which vehicle had the bait item).
- GPS bait initially had a 10-second delay which was done to save battery life – making it more difficult to track. We later switched to a one second delay.
- Hand-held locator device was not as accurate as previously thought once the device stopped moving- problematic if the device made it into a hotel room/apartment.

Deterrence

Research has shown that increasing foot and vehicle patrols in hotspot areas will have an effect, and in Philadelphia, they showed a 23% decrease (Ratcliffe et al., 2017). However, improving the presence of police might be enough to reduce crime. For example, in a recent trial conducted in Connecticut, the use of police lights was tested to see whether having lights on would reduce MVT (Johnson, 2018, unpublished). Reductions were seen in MVTs,

pedestrian stops, and traffic stops.

Other strategies are rooted in deterrence and include reminders and notices to reduce an individuals' vulnerability to crime, especially during times where rates of crime are relatively high. One study that focused on the theft of newspapers measured the effect of two types of messages. The first posted message referred to rule-governed control, the second was more demanding, and specified aversive consequences for theft. Clarke (1995) concluded that each sign was equally effective in reducing newspaper theft, compared to not having any notices at all. We aimed to do just that with crime prevention awareness flyers and electronic bulletin boards.

HideitLockitTakeit Campaign (2017)

For the 2017 Christmas season, we launched a crime-prevention campaign, coined "HideitLockitTakeit" to deter and bring forth awareness about MVT occurring around the holidays. Officers and volunteer staff delivered awareness flyers to patrons and merchants. We also messaged to the masses via an electronic bulletin board on a major interstate that served both to notify the public and put thieves on notice that we were watching. (Appendix E, Illustrations - 11, 12, 13, and 14). Messaging works in concentrated areas. For example, a study on terror alert levels showed that crime decreased significantly in the National Mall when DHS terror alerts were elevated (Klick & Tabarrok, 2005).

We also tested various prevention methods over the pilot period (unoccupied police cars, & focused patrol), where data was analyzed and assessed as we went along. The evaluation included unoccupied police vehicles parked throughout the shopping center, all based on hotspot analysis – (Appendix E, Illustration 9; Appendix B, Chart 1).

RCT: *Deterrence via Lights on Versus Lights off* (2018)

In 2017, we spent a significant amount of money deterring & detecting MVTs with GPS bait technology, crime prevention flyers, and hidden cameras. In 2018, we wanted to determine whether we could effectively deter MVTs while cutting costs. To determine whether increased patrol visibility reduced crime, we sought to test the use of flashing code-2 police lights for reducing property crime. Code-2 police lights are steady flashing blue and red lights on a patrol car that served to increase awareness and perception of police presence.

From 23 November 2018 to 28 December 2018 (excluding 24 and 25 December), two police cars were assigned to the Vallejo Plaza Shopping Center for 34-days from 12 to 10 PM. We randomly assigned the vehicles to utilize flashing blue and red lights - either *on* or *off*. We texted reminders to the officers of the condition (lights on or lights off) before the start of their shifts. Code-2 lights remained on or off during the entire shift except when responding to alarms or non-routine calls for service with a possible threat to officer safety.

We checked internal validity by conducting surprise spot checks and reviewing store parking lot surveillance. Every time a check was performed, we found officers complied with the condition. Measurements included auto theft, auto burglary (theft from auto), and arrests, as well as police activity in a hotspot – evaluating proactivity such as DMV-registration checks and citizen contacts.

ASSESSMENT

What if police could shift their role in a democratic society to one that restructures reward systems and that focuses on deterrence/prevention to achieve desired crime reduction outcomes (Lum and Koper, 2017)? The results might include improved community legitimacy

based on precise data-driven policing.

When attempting to be data-driven and implementing multiple interventions simultaneously, there is always a challenge in determining causality. Many police researchers and EBP purists probably prefer the police to implement one intervention at a time, to isolate the causal effect better. However, in the real world of policing with real victims and a constant focus on reducing costs – it seemingly makes sense to implement multiple interventions simultaneously. We did just that in 2017 with unoccupied police car placement, the evaluation of police activity, GPS bait technology, and crime awareness flyers. In 2018, we utilized a randomized *lights on* scheme, which aimed to isolate/compare the intervention with the business as usual or *lights off* to see if it was effective & impactful. We are proud of the simplicity of the design and its ability to be replicated in other jurisdictions – although statistical power was limited.

We had a spike in MVT for 2016, and perhaps for the subsequent year of 2017, we regressed to the mean. A commonly cited phenomenon is irresponsibly lauding crime efforts without looking at the contextual data (Mitchell, 2019). However, when we looked at data leading up to the interventions, our crime increased, but then we saw a sharp dip after the interventions – showing a possible causal effect.

Most importantly, we learned from evaluating our officer's activity, i.e., officer/citizen contact or objective data captured by our computer-aided dispatch on DMV registration checks, that those officers that were more active, not surprisingly resulted in less MVT. We also learned that officers seemingly deter more crime when patrolling with flashing police lights on as evident by zero auto thefts compared to 4 with flashing police lights off. There

were a modest 6 thefts from auto with *lights on* compared to 8 with *lights off*. However, removing an outlier on the last day of 4 thefts, reduces the p -value from 0.07 to 0.03.

The more relevant question might be, “what do police do in hotspots?” We were able to evaluate data that showed support for previous research that increased citizen contacts resulted in less crime (Boydston, 1975). However, these interventions in 2017 were costly in the form of overtime, technology purchases, and unique methods of building awareness via the purchase of flyers and electronic bulletin board awareness. Thus, in 2018, we aimed to cut our costs, yet still be effective. The goal then was to increase the perception of more officers while target hardening the area by keeping our code-2 lights on to combat MVT. Of note, we observed 12 MVTs outside our focused patrol times (12 to 10 PM) – indicative of us displacing MVTs to outside those times.

In 2018, we learned that while MVTs rose in the entire city by 15% (*1262* for 2017 vs. *1478* for 2018). In contrast, MVT numbers fell in the specific area where we piloted our prevention program. For example, Gateway Plaza MVTs decreased by 21% (*311* in 2017 vs. *245* in 2018). It is difficult to establish causation as to why MVTs decreased throughout the year for the Vallejo Gateway Plaza Shopping Center despite the increase throughout the city. One theory is our crime prevention flyers influenced local retailers. Perhaps they took matters into their own hands by increasing guardianship. Signs and private security increased after we left our focused presence/holiday patrol (Appendix E, Illustration 19-20).

We are proud of efforts to evaluate officer activity in this high-density shopping center hotspot. We showed when officers are more proactive, i.e., increased citizen contacts in 2017 or in 2018 when officers had their lights on and increased their DMV registration checks - that

this activity led to positive outcomes (less MVT).

Because we tested and evaluated data, we may have informed future projects & the expansion of other studies on what works, what does not, and what may need more evaluation to combat MVT during the holiday season. Implementing perceived change is difficult especially when emphasizing deterrence. Despite the modest statistical success, we demonstrate here, it is important to remember that the changes we implement often have much more impactful success on the day to day lives of our officers and the community members they serve.

Key Project Team Members

Vallejo Police Department

Chief Andrew Bidou
Lieutenant Jason Potts
Crime Analyst Andy Bates
Sergeant Jerome Bautista
Sergeant Ted Postolaki

BetaGov

BetaGov New York University, Director – Angela Hawken, PhD
BetaGov New York University, Trial Design Manager – Maureen Hillhouse, PhD
BetaGov New York University, Statistician – Ariana Anderson, UCLA (2017)
BetaGov New York University Statistician – Pashmeen Kaur, UCLA (2017)
BetaGov New York University, Statistician - Sarah Arango, NYU (2018)

Project Contact Person:

Jason Potts
Police Lieutenant
111 Amador Street
Vallejo, California 94590
(707) 333-6426
Jason.potts@cityofvallejo.net

Appendix A: Tables

Table 1 - Auto Burglaries for Vallejo Plaza Shopping Center– Each Calendar Year

Auto Burgs for Plaza	2015	2016	2017	2018
	266	294	311	245
<i>Total Number of Auto Burglaries for Vallejo Plaza Shopping Center – Calendar Year – 21% decrease from 2017</i>				

Table 2 - 8 Nov to 28 Dec

8 Nov – 28 Dec	2015	2016	2017	2018
	33	44	25	28
<i>Auto Burglaries in Vallejo Plaza Shopping Center 8 Nov to 28 December – 40% decline from previous year 2016 – despite numbers for 2017 being the highest in that 4-year span</i>				

Table 3- Black Friday to 28 Dec

Black Friday to 28 Dec	2015	2016	2017	2018
Total	25	22	19	24
<i>Auto Burglaries in Vallejo Plaza Shopping Center Day After Thanksgiving to 28 December – 21% increase from 2017 to 2018</i>				

Table 4- Auto Burglaries for the Entire City

Auto Burgs for Entire City	2015	2016	2017	2018
Total	1192	1135	1262	1478
<i>Total Number of Auto Burglaries for Entire City – Each Calendar Year (1 Jan to 31 Dec) -15% increase 2017 to 2018. Theft from Auto up for the entire city, <u>but down 21% from it's high in 2017 in the Vallejo Plaza Shopping Center (Table 1).</u></i>				

Table 5 – FBI UCR statistics 2016-2018

Vallejo	Violent Crime	Murder	Rape	Robbery	Burglary	Auto Theft	Property Crime
2016	517	10	48	167	1,120	608	2419
2017	541	10	46	187	1,256	510	2369
2018	474	4	42	170	1,069	465	2024

2017- 2018 - Total Number of Auto Thefts for Entire City **decreased by 11%** “Burglary indicates - residential burglary” “Property Crime is all property crime – not just MVT).

According to voluntary 2018 FBI Uniform Crime Reporting Statistics:

<https://ucr.fbi.gov/crime-in-the-u.s/2018/preliminary-report/tables/table-4/state-cuts/table-4-alabama-through-california.xls>

Table 6: Thefts decreased in the December and as the number of Field Interrogations (FIs) increased

Variable	Estimate	Std. Error	t-value	Pr(> t)
(Intercept)	2.28204	0.51917	4.39558	
Field Interrogations (FI)	-0.07892	0.03485	-2.26494	*
December	-1.39233	0.43148	-3.22684	**
Traffic Citations	-0.00405	0.12711	-0.03186	
Parking Citations	-0.01912	0.07773	-0.24597	
Monday	0.08768	0.63633	0.13779	
Tuesday	1.28223	0.58545	2.19014	*
Wednesday	0.32026	0.57474	0.55723	
Thursday	0.12589	0.65142	0.19326	
Saturday	0.47230	0.57063	0.82767	
Sunday	0.06891	0.59400	0.11601	

Table 7: Predicting thefts using FI's, month, day of the week, citations, GPS bait devices, bulletin board and crime prevention flyers, Field interrogations (FIs) were statistically significant in reducing thefts in this model as well ($p < 0.05$, Table 7)

Variable	Estimate	Std. Error	t-value	Pr(> t)
(Intercept)	2.18256	0.70946	3.07639	**
GPS Bait	0.28665	0.40558	0.707	
Monday	0.14556	0.65699	0.22155	
Tuesday	1.19235	0.61092	1.95173	
Wednesday	0.20135	0.60465	0.33300	
Thursday	-0.23064	0.73360	-0.31439	
Saturday	0.53232	0.58428	0.91106	
Sunday	0.12286	0.61190	0.20079	
Field Interrogations (FI)	-0.09985	0.04165	-2.39736	*
Traffic citations	-0.03835	0.15727	-0.24383	
Parking citations	0.02102	0.08877	0.23681	
December	-1.11261	0.51189	-2.17353	*
Bulletin board	-0.55009	0.47226	-1.16480	
Crime prevention flyer	-0.04462	0.47308	-0.09433	

Table 8 – Electronic Bulletin Board. Attempting to show any correlation to increased awareness on a W/B Hwy 80 at Redwood street and less thefts from auto for those days

Start	Time	Stop	Time	# of Days	Total Days	THEFTS
12/1/17	9:00 AM	12/4/17	9:00 AM	3	14	2
12/8/17	8:00 AM	12/11/17	8:00 AM	3		1
12/18/17	4:30 PM	12/20/17	8:00 AM	1		1
12/22/17	8:00 AM	12/27/17	8:00 AM	5		1
12/30/17	8:00 AM	1/1/18	8:00 AM	2		

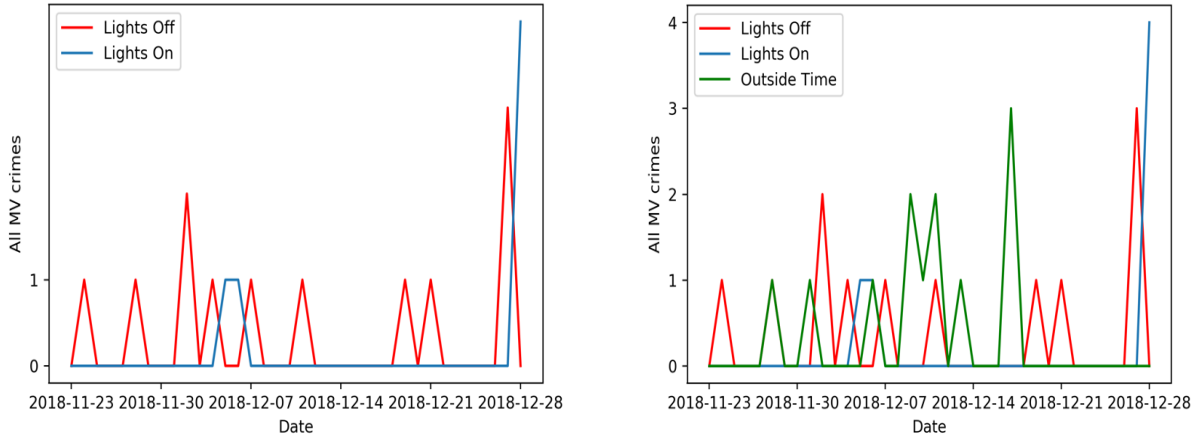
5 thefts out of 9 for month



Table 9- 2018 RCT Outcomes - *Lights On* versus *Lights Off* deterrence assessment for Vallejo Plaza Shopping Center

	Lights On (n=17)	Lights Off (n=17)	P value	Percentage
Total auto crimes	6	12	0.07	- 50 %
Total auto thefts	0	4	0.03	- 400 %
Total auto burglaries	6	8	0.4	- 25%
Daily average Vehicle registration checks	12.5	7.4	0.12	41%
Daily average Arrests	0.8	0.4	0.2	
Daily average Citizen contacts	3.9	3.7	0.8	

Table 10- 2018 RCT p-value of 0.07 in a Fisher's exact test 1. Becomes statistically significant at p-value 0.03 when removing the atypical value of 4. *Outside time is 12PM-10PM*

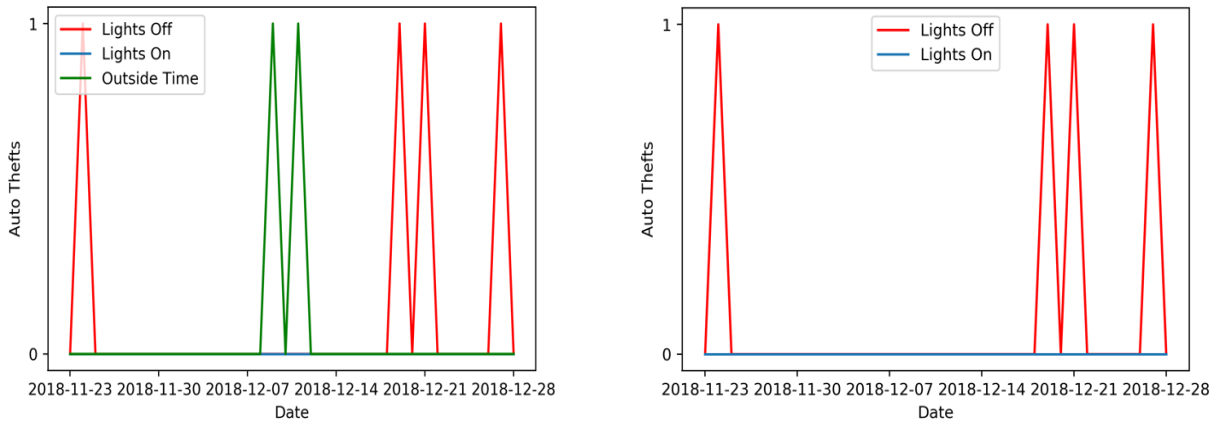


	All MV Crimes Lights On	All MV Crimes Lights Off	All MV Crimes Outside Time
sum	6	12	12
mean	0.4	0.7	0.4
std	1.0	0.8	0.7
min	0	0	0
25%	0	0	0
50%	0	1	0
75%	0	1	0
max	4	3	3
Binary			
count	17	17	34

Table 11 – 2018 RCT Difference between lights on and off: not significant – p-value of 0.4 in a Fisher's exact test (using a binary variable: burglaries or no burglaries). p-value is 0.2 when removing the atypical value of 4 burglaries in one night.

	Auto Burglaries Lights On	Auto Burglaries Lights Off	Auto Burglaries Outside Time
Sum	6	8	10
Mean	0.4	0.5	0.3
std	1.0	0.7	0.6
min	0	0	0
25%	0	0	0
50%	0	0	0
75%	0	1	0
max	4 ₃	2	3

Table 12- 2018 RCT Cohen's d 0.73
p-value of 0.1 in a Fisher's exact test



	Auto Thefts Lights Off	Auto Thefts Lights On	Auto Thefts Outside Time
sum	4	0	2
mean	0.2	0.0	0.1
std	0.4	0.0	0.2
min	0	0	0
25%	0	0	0
50%	0	0	0
75%	0	0	0
max	1	0	1

Table 13- 2018 RCT DMV Registration Checks and Arrest comparison

DMV registration checks			
	mean	std	sum
Lights off	7.4	6.3	126
Lights on	12.5	11.6	212

Even though there were 86 more DMV checks during lights on than during lights off, a t-test does not discard the null hypothesis that the means of both conditions are the same (p value of 0.12).

Arrests			
	mean	std	sum
Lights off	0.4	0.9	6
Lights on	0.7	0.7	12

Difference not significant according to a t-test. (p-value of 0.2).

Appendix B: Charts

2017 Thefts in Areas Before and After Unoccupied Police Cars were Introduced

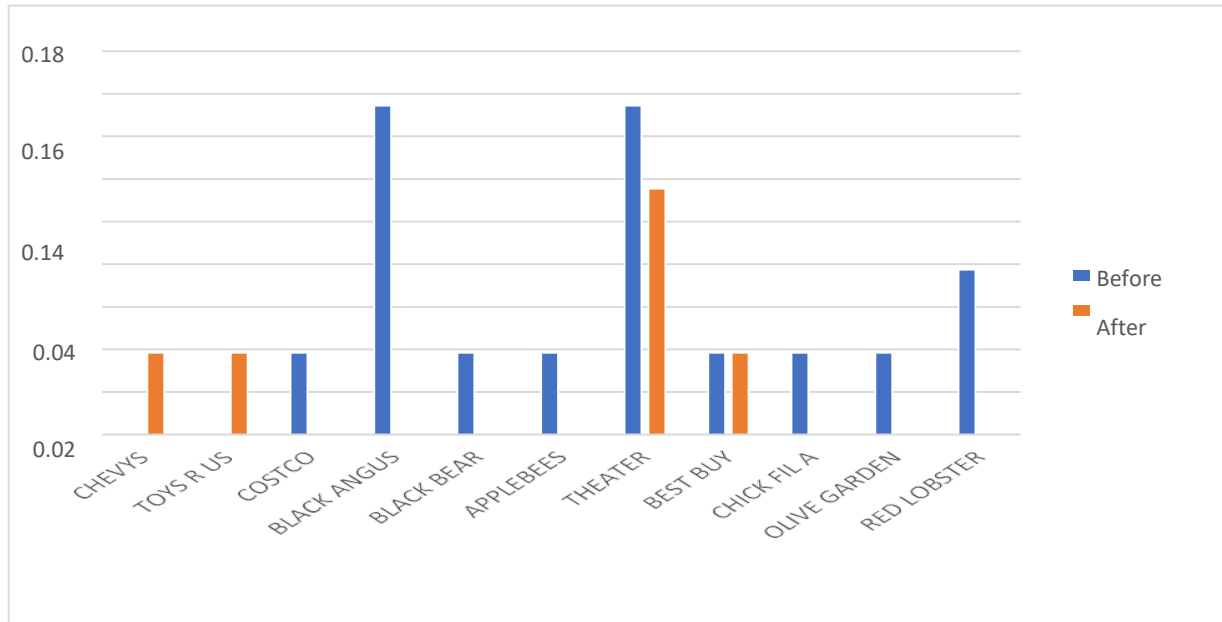


Chart #1: Ratio of thefts before and after the introduction of unoccupied police cars.

The numbers in the bar graph are the ratios. They are the number of thefts in that location divided by the total number of thefts during the time period (Dec 1 thru Dec 30, 2017).

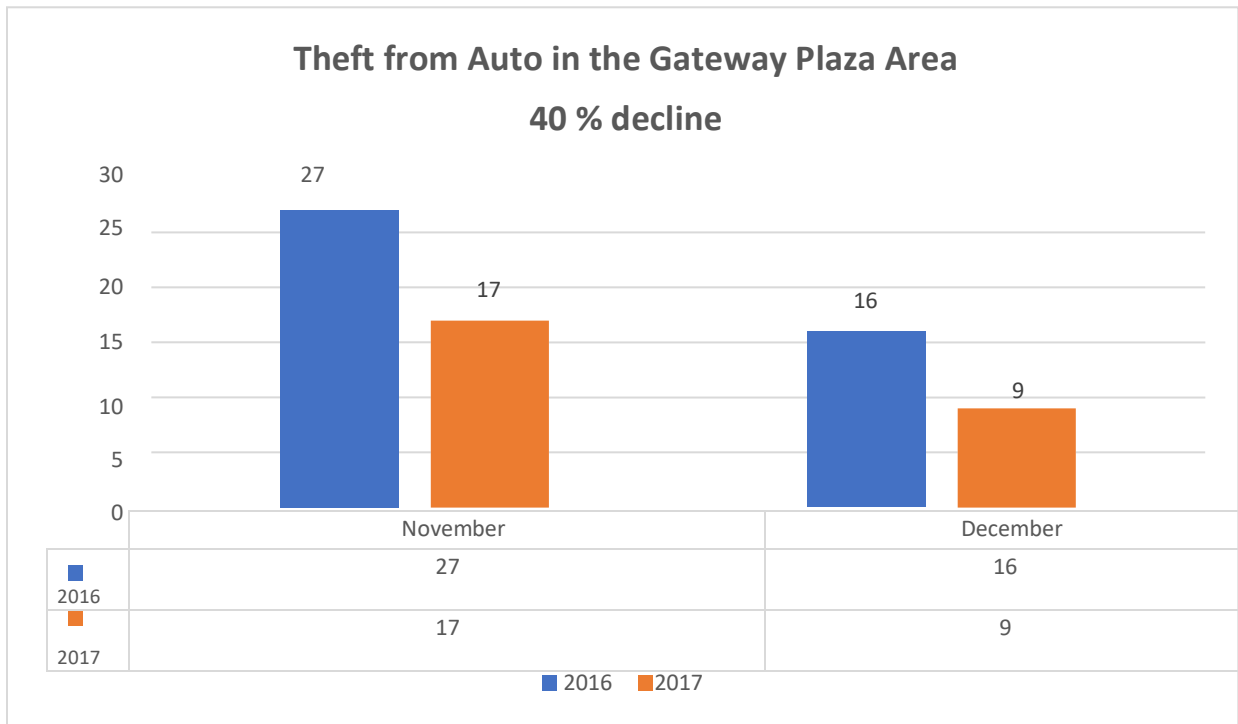


Chart #2 – 2017 illustrating the 40% decline from the previous year – blue is 2016 and orange is 2017

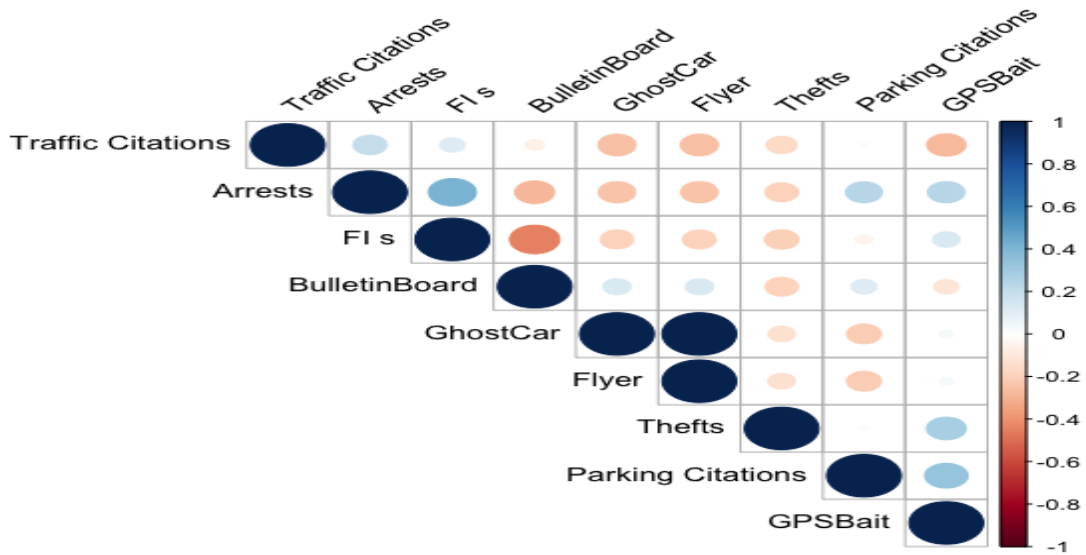
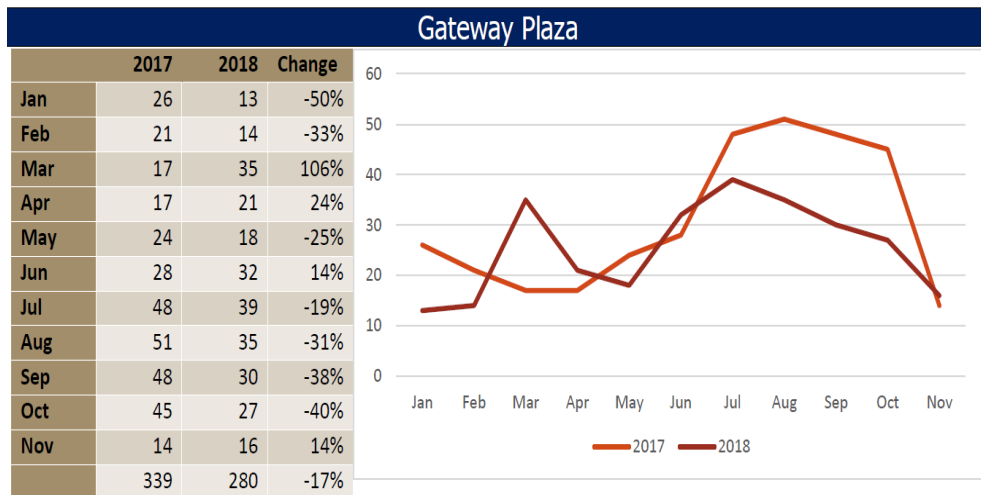


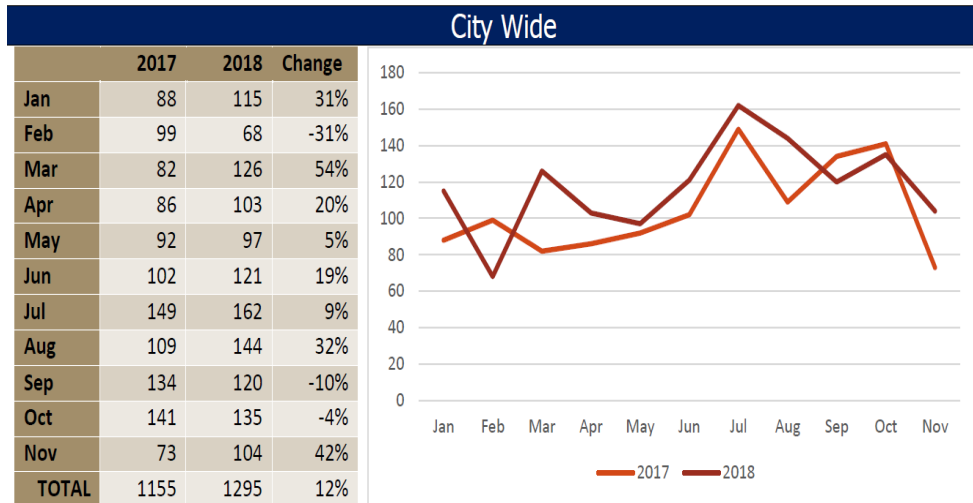
Chart #3 2017 Thefts: Correlation plot of all the variables

The numbers in the correlation plot are the correlation coefficients. **FI's (citizen contacts) were significant for both thefts and arrests. The orange circle represents a negative correlation, the data showed more FI's led to fewer thefts. FI's and Thefts are approximately -0.4**



The above is a year over year comparison of burglaries of automobiles at the Gateway Plaza located in the City of Vallejo. Data range compared is January 1st through November 23rd.

Chart #4 2018-2017 comparison of thefts from autos in Vallejo Plaza Shopping Center leading up to the 2018 project

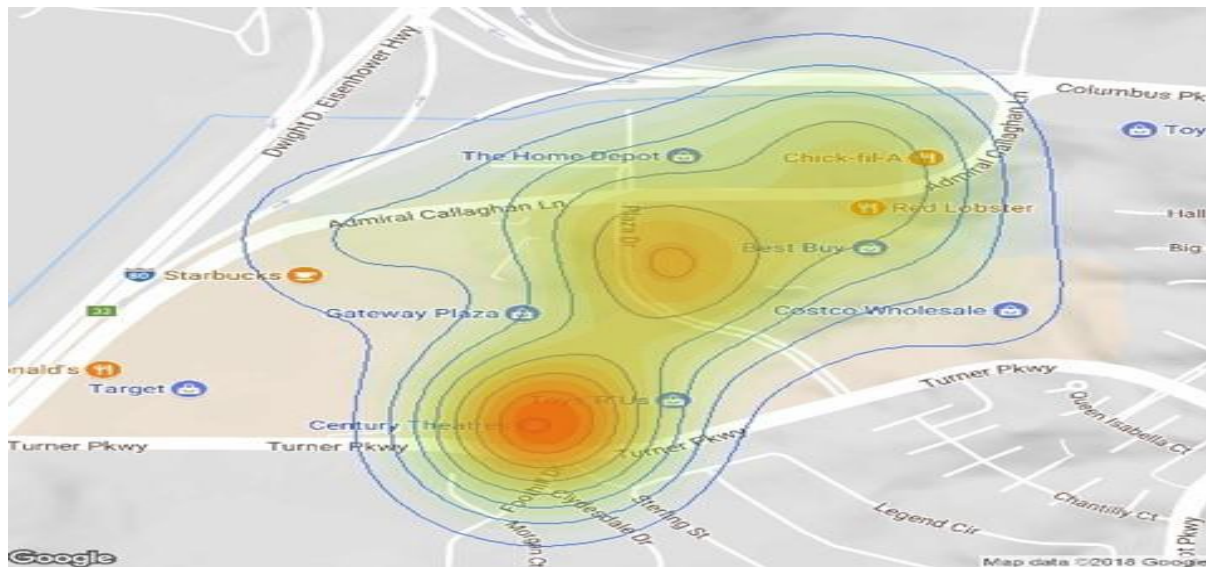


The above is a year over year comparison of burglaries of automobiles in the City of Vallejo. Data range compared is January 1st through November 23rd.

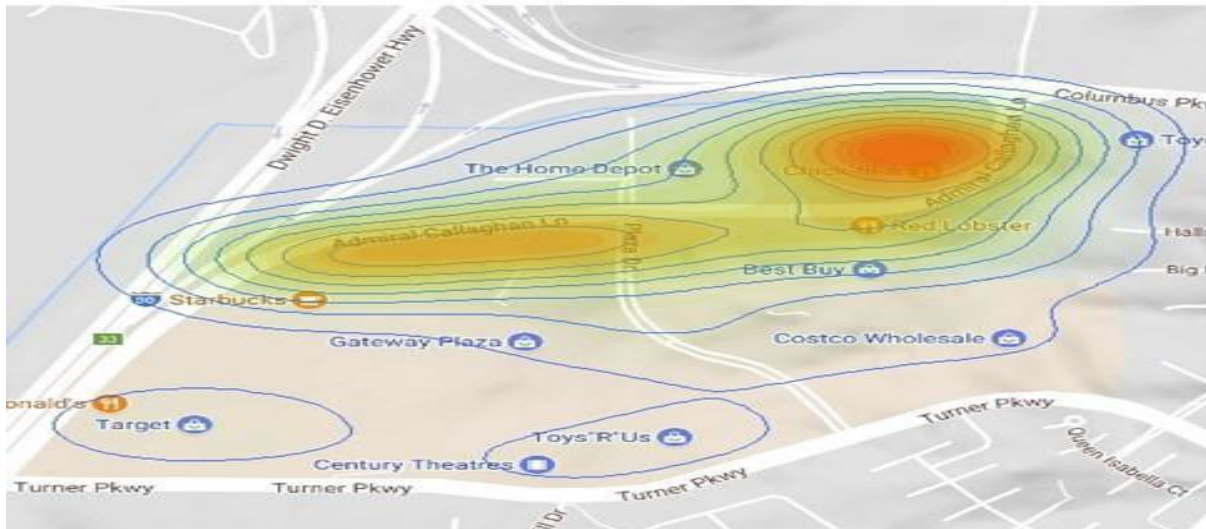
Chart #5 2018-2017 comparison of thefts from autos for the entire City of Vallejo leading up to 2018 project

Appendix C: Heat Maps

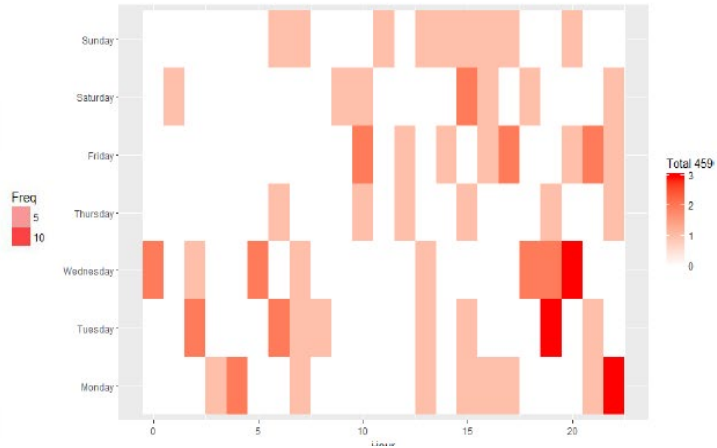
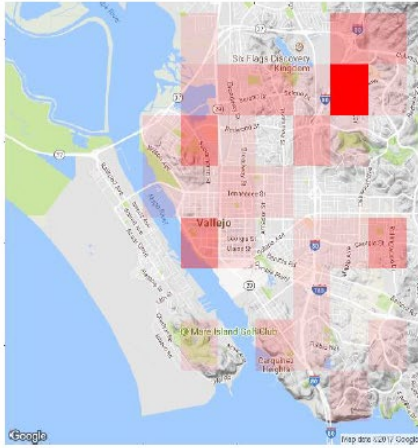
2017 Heat Map



2016 Heat Map

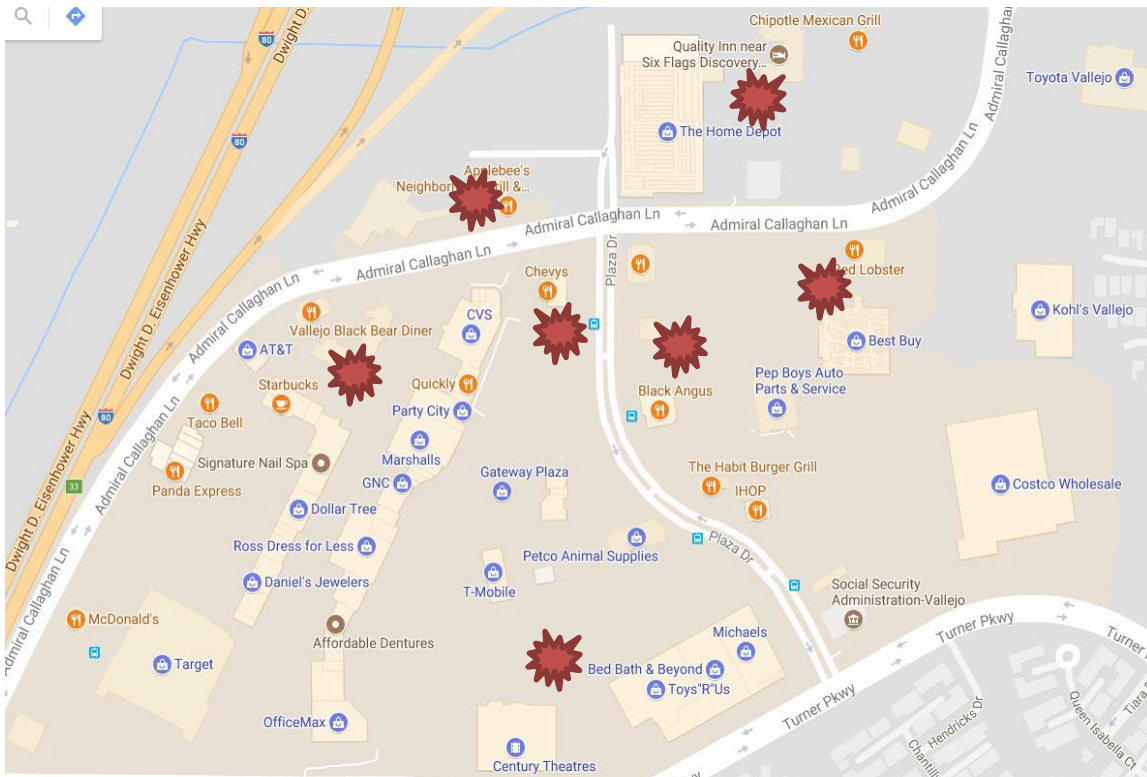


Heat Maps #1 and #2 – 2017. The above heat maps are examples of us continually *analyzing* and *assessing* thefts from autos with the assistance of our crime analyst. The thefts from auto data were based on information from our records management system (RMS). This data informed our decisions to strategically place unoccupied police cars at hotspot locations, directed our focused patrol, and placement of undercover decoy cars containing GPS bait items, Wi-Fi hotspots, and hidden cameras.

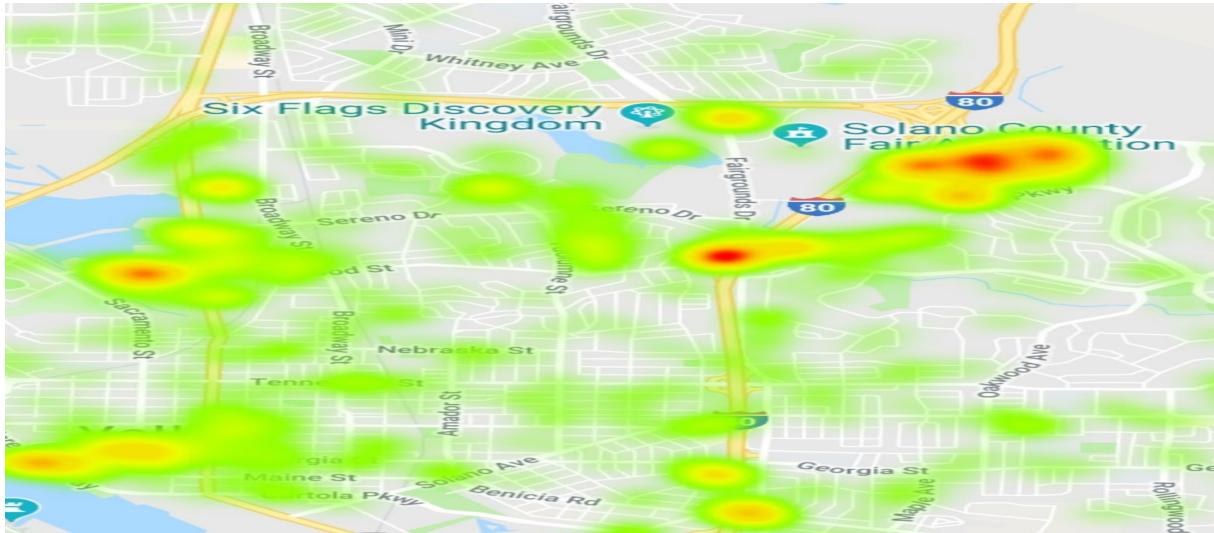


Heat Map #3 Heat maps of MVT in Vallejo, CA for 2017. Derived from mapping reports of Auto Burglary or Theft from Auto. A) MVT by geography. B) MVT by Day and Time. Darker colors indicate greater activity. Previous to the project, our analyst discovered that there were **69 thefts from auto within the entire city**. The majority were occurring in shopping areas. Note the map above with the areas of Gateway Plaza, **Vallejo Plaza** and Georgia Plaza being the hardest hit.

2017 Holiday Patrol – Area of Responsibility
Indicates hotspots in the area



Heatmap #4 – 2017 – Hotspots with intervention area. We placed unoccupied police cars in those areas.



Motor Vehicle Theft – 22 Apr 18 thru 22 Apr 19 – present hotspots

Heat Maps #5 2018. The following hotspot heat map is provided to show an example of our constant assessment of stolen property in the City of Vallejo. From the first photo above, the Vallejo Plaza Shopping Center continues to be a hotspot for thefts from auto – especially since we left our focused patrol for the month of December. Motor-vehicle hotspots are generally in shopping centers, large parking lots, or restaurants which are near freeway on and off ramps for Hwy 80.

Appendix D: BetaGov – One Summary Snapshots of Trials



Theft-Deterrence Strategies

Targeting seasonal crime with multiple deterrence components

Agency: Vallejo (CA) Police Department

Pilot Duration: 11/08/17–12/30/17

Pracademic*: Lieutenant Jason Potts

Context
Holiday shopping provides an increased opportunity for thefts of personal items from cars. Shoppers may move from store to store in a shopping center, depositing items in their cars as they shop. Thieves may be especially adept at targeting these items and such crime often increases over the holiday season.

Key Finding
Increased efforts to deter crime appeared to have led to a significant reduction in auto burglaries.

*BetaGov trains agency personnel to become research-savvy "Pracademics" who lead trials.

Background

Deterrence strategies attempt to reduce crime and may include the increased presence of officers, threats of apprehension for specific offenses, and focused police efforts in targeted areas. Research has shown that targeted deterrence strategies may be more effective if limited in duration and rotated across targets. Such strategies include reminders aimed at reducing crime vulnerability and increasing surveillance.

Pilot Design

The Vallejo Police Department launched a crime-prevention campaign, *Hide it Lock it Take it*, in an effort to deter crime that occurs around the December holidays. The campaign reminded the community about methods for preventing theft of items in cars. This pilot used a quasi-experimental design in which deterrence components were tested over the pilot period. Strategies tested included crime awareness flyers and billboards, surveillance, and increased "Holiday Patrol" in a high-density shopping center. Also included was the use of GPS devices placed inside locked undercover cars, and unoccupied police vehicles parked in the shopping center. Social and local media were used to increase awareness. Patrols, flyers, and billboards were used

December 1–30; and undercover surveillance and decoy cars were used November 8–December 30.

Results

Deterrence methods were associated with fewer auto burglaries ($p < 0.05$). Police-citizen contacts were a strong predictor of outcomes ($p < 0.05$), and the combined deterrence methods corresponded with a 40% drop in 2017 auto burglaries from the same time period in 2016. This is an important finding since the number of car burglaries in 2017 were greater than in 2016, prior to this campaign. These strong findings underscore the need for a replication study, preferably using an experimental design to rule out time-variant trends in crime.

Auto Burglaries in Target Area, Equivalent Period 2016 & 2017



Why BetaGov?

We are fast. We are free. And we focus on research that matters to you. BetaGov focuses on practitioner-led research that tests locally generated advances in education, criminal justice, health, and human services. We support more than 200 randomized controlled trials across a dozen states. One trial at a time, we are changing the way knowledge is created in the public sector.

Snapshot #1 – 2017 Quasi-experiment design in which deterrence and enforcement components were tested over the pilot period – 8 Nov thru 30 Dec 2017



Police Vehicle Lights

Reducing crime through increased police visibility

Agency: Vallejo (CA) Police Department

Trial Duration: 11/23/18–12/28/18

Pracademic*: Lieutenant Jason Potts

Context

Some types of crime increase over the holiday season but one promising method of crime deterrence is simply to increase police presence. To determine whether increased patrol visibility reduces crime, the Vallejo Police Department tested whether keeping Code-2 lights on would reduce crime during the holiday season at a specified shopping center.

Key Finding

No auto thefts occurred on days when cruiser lights were kept on compared to four thefts on days when the cruiser lights were off.

*BetaGov trains agency personnel to become research-savvy "Pracademics" who lead trials.

Background

"Code-2" police lights refer to steady flashing blue and red lights on a patrol car that serve to increase awareness and perception of police presence. Increasing the number of law-enforcement personnel may generally help to reduce crime, but the major limitation of this strategy is the cost of resources. Manpower and equipment are costly and must be justified. However, it may be that the appearance of increased police presence is a more cost-effective method of reducing and deterring crime than increasing patrols.

Results from increased police presence to deter crime have been mixed. For example, random policing is not seen as successful, whereas increasing patrols in high-crime areas (hotspot policing) has shown reductions in crime.

Trial Design

The Vallejo PD used a randomized controlled trial design to investigate the effectiveness of keeping Code-2 police-vehicle lights on for reducing crime in a specified shopping area over the 34-day holiday season. Randomization to lights on (intervention) and off (control) accounted for day-of-week and weather conditions.

Two police cars were assigned to a high-density shopping center each day for each shift. Officers were told of condition assignment prior to their shifts and were texted reminders during the start of their

shifts. Code-2 lights remained on or off during the entire shift except when responding to alarms or non-routine calls for service with a possible threat to officer safety. Frequent spot checks confirmed officers were adhering to the protocol. Outcomes included auto theft, auto burglary, and arrests as well as non-crimes such as DMV-registration checks and citizen contacts.

Results

The table shows the number of events by condition and the statistical results. There were significantly fewer auto thefts in the lights-on condition. No other outcome differences were statistically significant. The low numbers of crimes and other events limited analyses and interpretation of findings.

Outcomes

	Lights On (n=17)	Lights Off (n=17)	P value
Total auto thefts	0	4	0.03
Total auto burglaries	6	8	0,4
Daily average DMV checks	12,5	7,4	0,12
Daily average arrests	0,8	0,4	0,2
Daily average citizen contacts	3,9	3,7	0,8

Snapshot #2 – 2018 RCT to assess the effectiveness of flashing blue and red lights on the deterrence of thefts from auto and auto theft – 23 Nov thru 28 Dec 2018

Appendix E – Illustrations of our Interventions



Illustration #1 The above photo is an example of a suspect we believed was utilizing an Apple personal hotspot to target a victim who left his iPad inside his car with his personal hotspot activated. In this instance, CCTV video depicted the victim go inside a fast food restaurant to get a coffee. These suspects then drove up to his car, parked, broke the back window, took a bag containing Apple products, and were gone in approximately 30 seconds without ever fully exiting their car

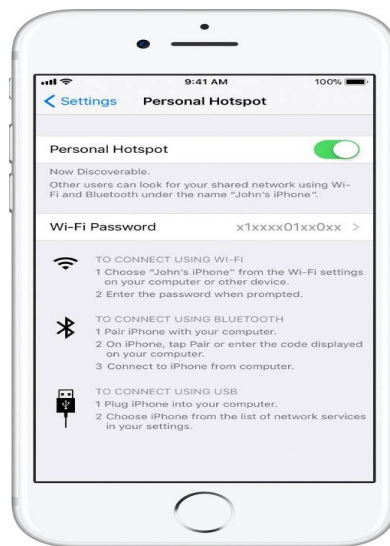


Illustration #2 The above example is a screenshot of an Apple product we believed criminals were using to target other Apple products. These criminals would then drive around lots with their personal hotspots on looking for other Apple products, i.e., MacBooks, iPads, and iPhones also activated and left inside cars.

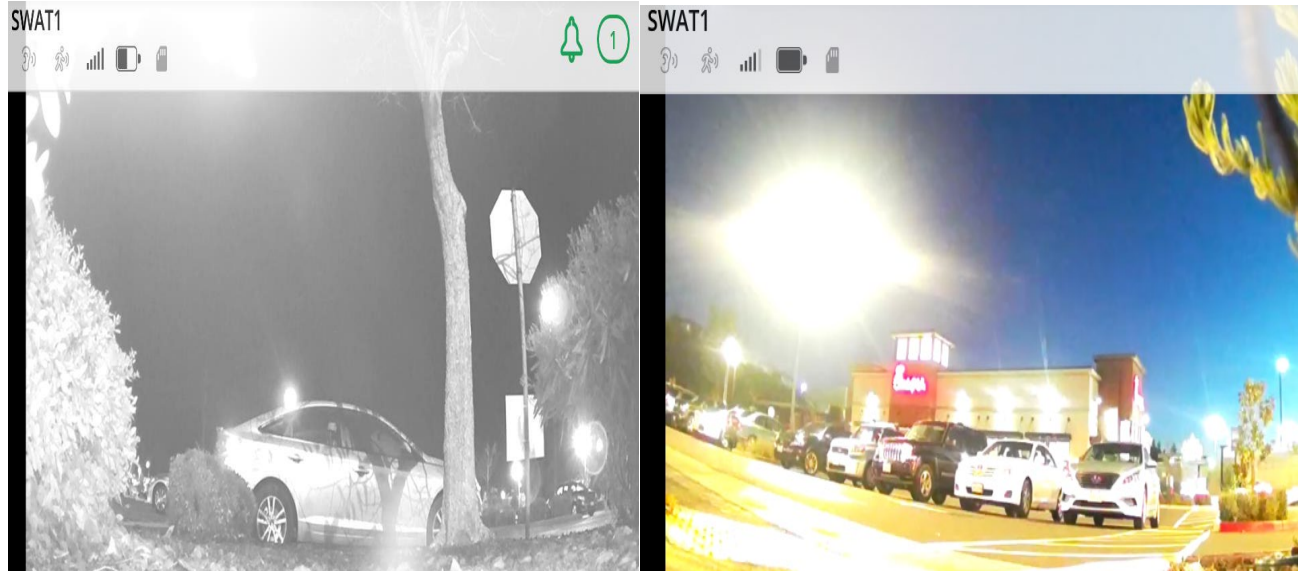


Illustration #3 and #4 Decoy cars and the utilization of a hidden cameras, containing both a commonly stolen item employing a GPS device, coupled with a Wi-Fi hotspot labeled “Jason’s MacBook” used to attract criminals targeting Apple computer devices.

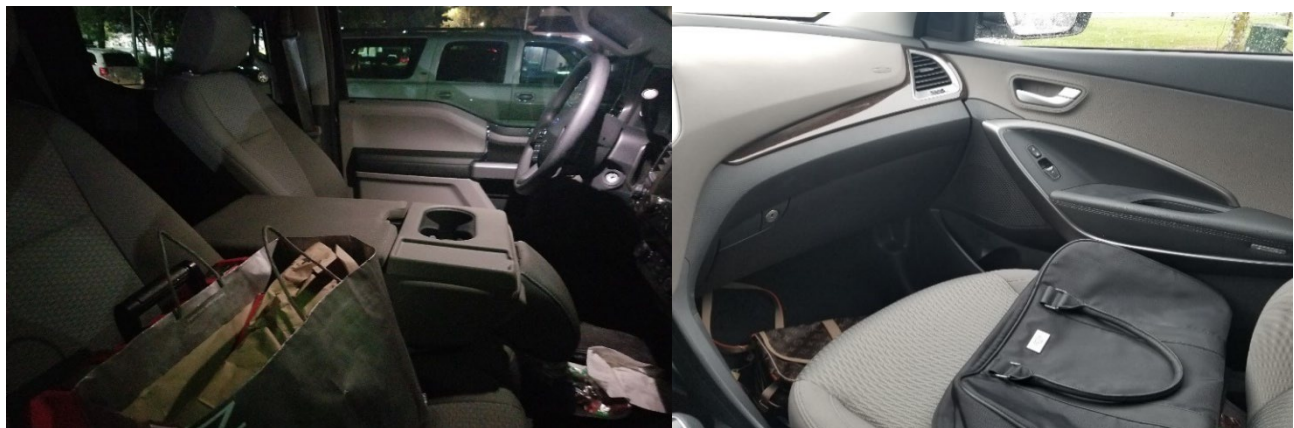


Illustration #5 and #6 GPS bait devices placed inside undercover vehicles (typically rental looking cars) which we learned from informants that thieves were targeting due to their believe that they were traveling, not aware of the area, and would have a tendency to leave items inside.



Illustration #7 GPS device above hidden inside commonly stolen devices such as power tools or laptop computers

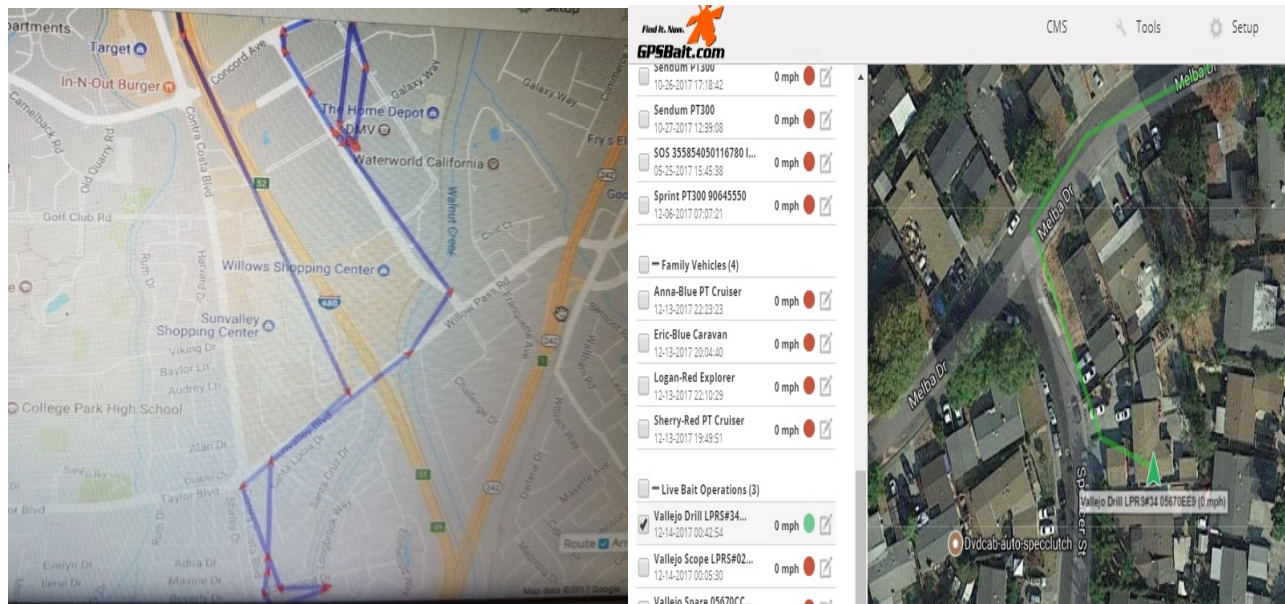


Illustration #8 GPS bait device tracking a theft from auto thief to a neighboring city. We eventually tracked the thieves to a residence where a search warrant was authored and merchandise from other thefts along with a gun were recovered.



Illustration #9 Unoccupied police cars (decoy cars) randomly parked in different locations throughout the shopping center. We randomly selected the times and locations to correspond to when the thefts were occurring. We then evaluated the data to test their deterrent effectiveness. There was a correlation, but it did not quite meet statistical significance.

Some of these big box store merchants donated commonly stolen items along with a laptop computer for our enforcement strategies.

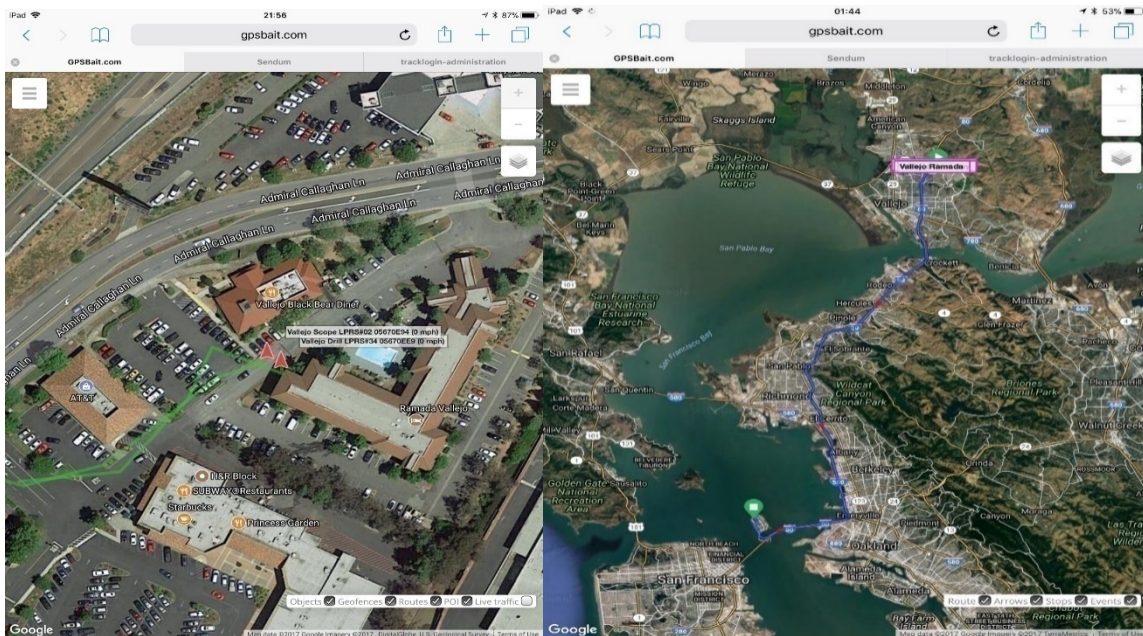


Illustration #10 GPS bait device tracking all the way to San Francisco and Treasure Island where the suspect located the device and threw it out the window. As we attempted to catch up to them, they noticed us following them more than likely because they were scanning us on a police app.



Hide it. Lock it. Take it.

1,134 thefts in 2016

Get Involved!

As we all know, Vallejo is a wonderful community to call home.

Despite being such a great place we need your help. Crime happens but you don't have to be a victim! Don't forget to lock your car, put belongings out of sight (such as in a trunk), or simply take valuable items with you.

If you see something, say something! Spread the word and don't leave your valuables in plain sight.

Check out @HideitLockit or the Vallejo PD's Facebook page at fb.com/VallejoPD for more information!

Visit the Vallejo Police website at vallejopd.com and click on **Hideit.Lockit.Takeit** to find crime prevention tips for the upcoming holiday season.

Illustration #11 and #12 Crime prevention flyers handed out by officers on focused holiday patrol and by volunteers. This flyer also had information for citizens to access about our social media platforms on both Twitter and Facebook. They were both placed on car windshields in specific quadrants of the shopping center to coincide with the presence of unoccupied police cars. Flyers were also provided to all merchants in hopes of increasing awareness. The local newspaper also covered the story. A crime analyst and statistician with BetaGov assessed the effectiveness of that strategy by analyzing the data.



Illustration #13 and #14 Electronic crime prevention bulletin board on Hwy 80 depicting our HideItLockItTakeIt campaign to increase awareness and encourage capable guardians. We quasi randomized when the electronic bulletin board was activated and compared the auto burglary theft data to when the electronic bulletin board was not activated. The advertising company claimed that the average daily traffic was 266,000 people who traversed that freeway and who had the potential to look at our HideItLockItTakeIt campaign sign.

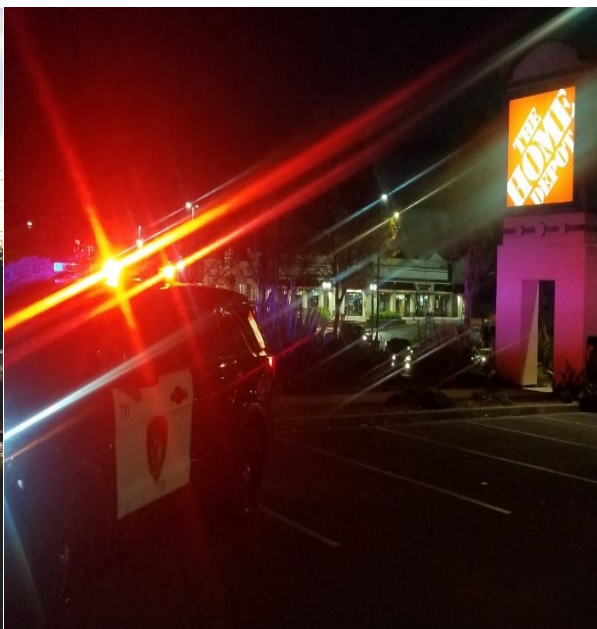


Illustration #15 and #16 – Photos from our lights on days in our high-density shopping center (Vallejo Plaza Shopping Center).

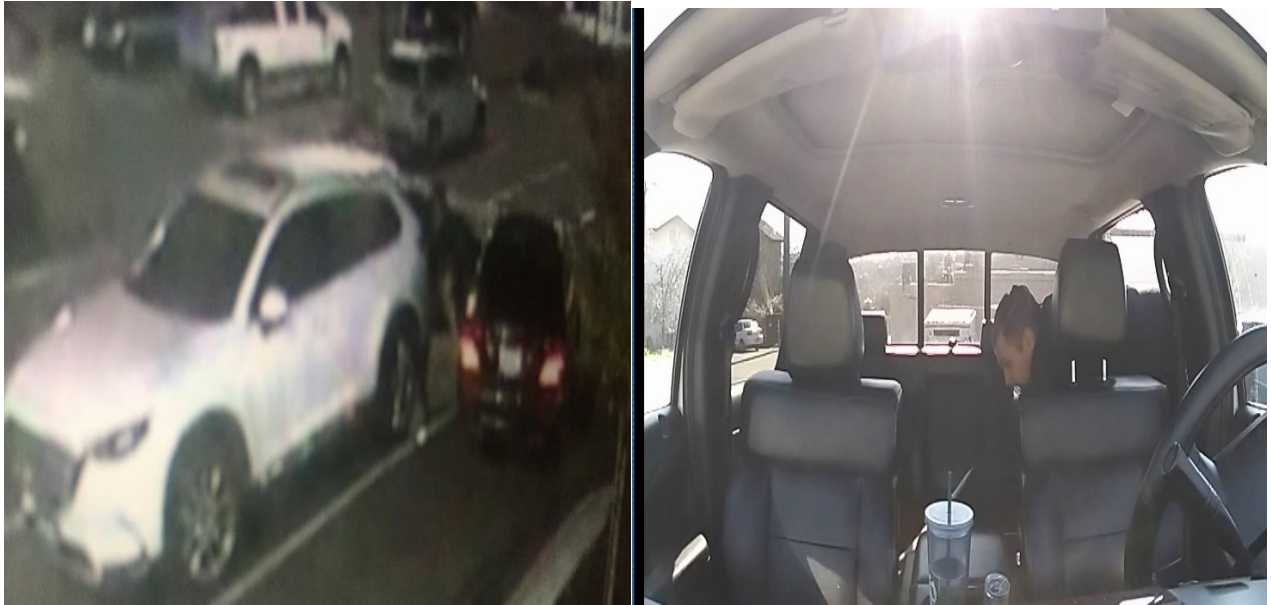
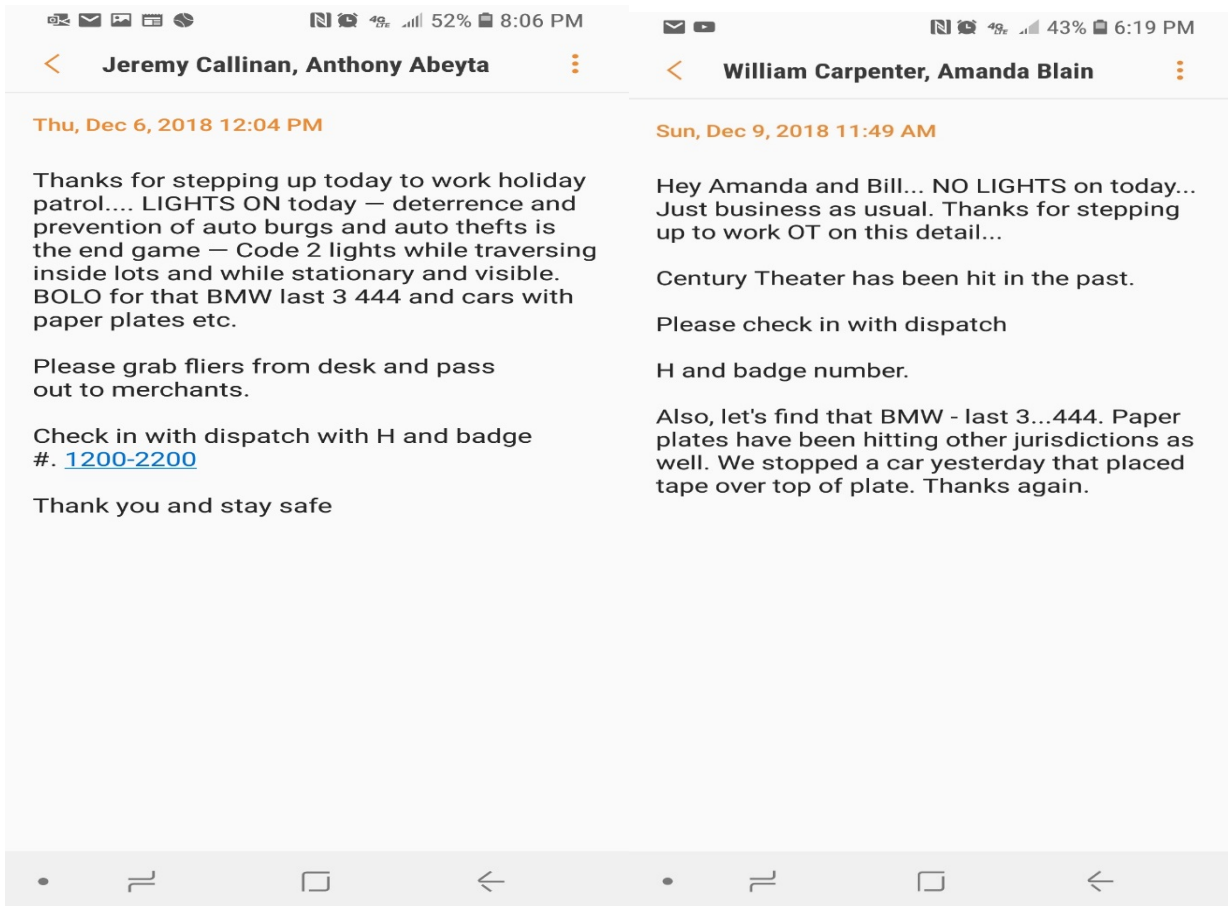


Illustration #17 and #18 – Photos from CCTV at a nearby restaurant and citizens taking security into their own hands with their own undercover surveillance videos.



Illustration #19 and #20 – Merchants in the Vallejo Plaza Shopping Center taking responsibility for their customers security by building crime awareness. The first sign says, "Lock, Take, Hide."

Appendix F – Text Message Reminder for Condition



An example of daily text reminders to officers working the detail. Included also is a social media post from a citizen about the positive crime awareness efforts.

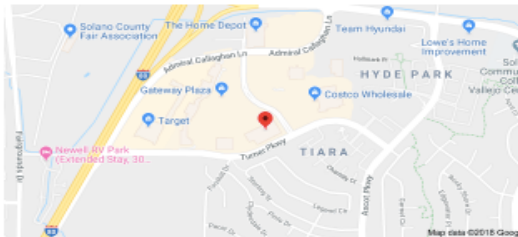


Guidelines for Light Usage:

- The two marked holiday patrol units will participate on designated days (ON) or (OFF). **The purpose is to compare auto burglary and auto theft data to those off days or business as usual.**
- **"Lights On" (Intervention)**
 - Code 2 lights (yellow ambers) should be kept "on" for the duration of the holiday patrol shift, even after sunrise (shifts 12-22)
 - Code 2 lights should be kept on when officers are parked, patrolling, engaged in traffic enforcement, or monitoring traffic.
 - Code 2 lights should be turned off when responding to alarms or non-routine **calls for service where there is a threat to officer safety** (e.g. domestic disturbance, robbery in progress, etc.). Officers must reactivate Code 2 lights upon clearing any eligible call for service.
- **"Lights Off" (Business as usual)**
 - Code 2 lights should be kept "off" for the duration of the shift.
 - Code 2 lights should only be engaged when necessary for the purpose of officer safety and/or public safety.

Holiday Patrol Activity:

Please take all Code 7s in the Plaza Quadrant from Columbus Parkway (North) Admiral Callaghan Lane (West), Turner Parkway (South) and N. Ascot Parkway (East).



Holiday Patrol Officers will be responsible for all auto burglaries and auto thefts.

The purpose is to stay visible and deter any theft from the parking lots. You must login in as H and your badge number.

Instructions each day for assigned overtime Holiday Patrol Officers

Appendix G - Crime Prevention Flyers 2017 and 2018

Hide it. Lock it. Take it.



2017 had **1,261** thefts from autos **105** a month **3** a day

Get Involved!

As we all know, Vallejo is a wonderful community to call home.

Despite being such a great place we need your help. Be aware - crime happens but you don't have to be a victim! Don't forget to lock your car, put belongings out of sight (such as in a trunk), or simply take valuable items with you.

If you see something, say something! Spread the word – Take your valuables with you or don't leave them in plain sight.

Check out **@HideitLockit** or the Vallejo PD's Facebook page at **fb.com/VallejoPD** for more information!

Visit the Vallejo Police website at **vallejopd.com** and click on **Hideit.Lockit.Takeit** to find crime prevention tips for the upcoming holiday season.

2018 Crime Prevention Flyer

Hide it. Lock it. Take it.



1,134 thefts in 2016

Get Involved!

As we all know, Vallejo is a wonderful community to call home.

If you see something, say something! Spread the word and don't leave your valuables in plain sight.

Despite being such a great place we need your help. Crime happens but you don't have to be a victim! Don't forget to lock your car, put belongings out of sight (such as in a trunk), or simply take valuable items with you.

Check out **@HideitLockit** or the Vallejo PD's Facebook page at **fb.com/VallejoPD** for more information!

Visit the Vallejo Police website at **vallejopd.com** and click on **Hideit.Lockit.Takeit** to find crime prevention tips for the upcoming holiday season.

2017 Crime Prevention Flyer

Appendix H - Local Media Awareness Campaign

Vallejo Police Department launches auto burglary awareness campaign



By **KATY ST. CLAIR** | kstclair@timesheraldonline.com | Vallejo Times Herald
PUBLISHED: November 26, 2017 at 12:00 am | UPDATED: August 29, 2018 at 12:00 am

The Vallejo Police Department is launching a "Hide it. Lock it. Take it." campaign to raise awareness of thefts from autos during the holiday season.

"Don't forget to lock your car, put belongings out of sight, or simply take valuable items with you," said Lieutenant Jason Potts in a news release.

Vallejo will be having extra officers patrolling the Gateway Plaza area off Admiral Callaghan throughout the holidays to combat auto burglaries and other crimes, Potts said.



Auto burglaries are on the rise, according to the department. Thieves are seeking out smart phones, laptops, iPads, and other tablets.

The thieves use the wifi signals on their own phones to zero-in on signals emitting from other electronic devices that people have left in their cars.

If you must leave a device in your car, police advise that you power it down.

"Remember, when you are shopping, thieves are watching," Potts said.

(707) 425-9
4088 Russell I
Fairfield, CA 94
www.gartontract
Sales Parts S

Sign up for email news

SUBSCRIBE

Follow Us



MOST POPULAR

- 1 Vallejo hires former O police chief as senior
- 2 Two Vallejo sisters arr assault in American C
- 3 Vallejo Chick-fil-A rest opens Thursday
- 4 Vallejo middle school dead
- 5 Bethel High girls volle sweeps De Anza on S Night
- 6 Vallejo's Midsi Sanche

Vallejo Police Department steps up patrol of Gateway Plaza



By VALLEJO TIMES-HERALD |

PUBLISHED: November 29, 2018 at 6:00 pm | UPDATED: November 30, 2018 at 11:18 am

The Vallejo Police Department is reminding residents to lock their cars, place belongings out of sight, or take valuable items with them during the holiday shopping season.

As a way to deter auto burglary and car theft, the department's dedicated holiday patrol and Crime Reduction Team detectives have stepped up patrols within the Gateway Plaza shopping center, the department announced Thursday.

The patrol is part of the department's "Hide it. Lock it. Take it." program.

Police have already made several auto-related arrests in the plaza this week, Vallejo police Lt. Jason Potts said in a news release.

Potts wrote that officers observed a stolen Chevrolet parked in the plaza on Monday. A check of the vehicle's license plate revealed it had been stolen out of Contra Costa County.

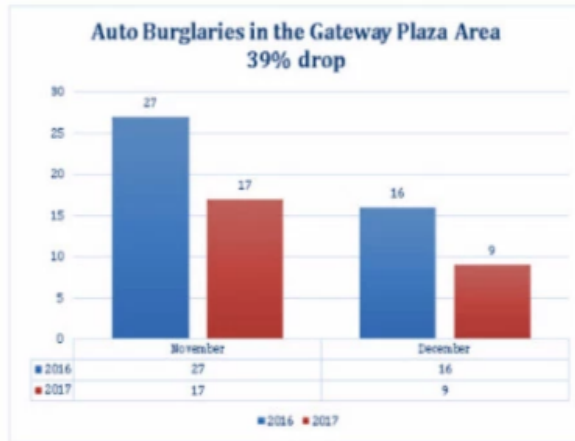
Willie Charleston, 33, of Pittsburg was arrested for possession of stolen property and auto theft and booked into Solano County jail, Potts confirmed.

Then on Wednesday, a Vallejo woman, and a man from Pittsburg were arrested for auto burglary.

Potts said that the Crime Reduction Team (CRT) detectives conducted undercover surveillance near the Starbucks located inside the Gateway Plaza located at 966 Admiral Callaghan Lane.

A woman parked her vehicle and went into the store for a brief moment, however, when she returned, her car window was broken and an iPad had been stolen, Potts wrote. Detectives were able to track the stolen iPad to Fairfield where they made two arrests, he added.

Vallejo police say new approach to car burglaries having success



1 of 2

VALLEJO POLICE DEPARTMENT — CONTRIBUTED A graph showing a significant decrease in auto burglaries at Vallejo's Gateway Plaza shopping center over the holiday shopping season compared to the same period in 2016, for which police officials credit a new data-driven approach.

By RACHEL RASKIN-ZRIHEN | rzrihen@timesheraldonline.com | Vallejo Times Herald
PUBLISHED: January 12, 2018 at 12:00 am | UPDATED: August 29, 2018 at 12:00 am

The Vallejo Police Department recently jumped on the cutting edge of smarter crime-fighting techniques, and it seems to be paying off, a department news release says.

Relying more on statistical data, the department's new approach over the holidays, resulted in a nearly 40 percent drop in auto burglaries from Nov. 8 until Dec. 31 2017 compared to the same period the year before, Lt. Jason Potts said.

One perennial police problem has been that officers can't be everywhere all the time. The new approach suggests they don't have to be, because "data will put officers in the right place at the right time," officials said.

ADVERTISING

The
ALL
WHEELS
1990
CLICK P

Sign

MOST PO

- 1 Vallej police
- 2 Vallej dead
- 3 Two \ assat
- 4 Agen trans Solar
- 5 Sever North softb
- 6 Vallej Wom

"The Vallejo Police Department has formed several strategic partnerships designed to enhance its crime fighting ability via the use of data," Potts said.

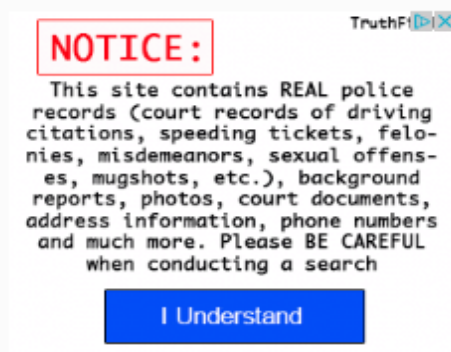
These partnerships have underscored an evidence-based policing approach that shifts the emphasis from traditional policing — random patrols, rapid response, and reactive investigations — "to supplementing those approaches by targeting, testing, and tracking crime and criminals with data analysis. Data will help police executives zero-in on where crime happens and who is committing it, as opposed to zeroing in on entire neighborhoods or geographic areas," he said.

This data-driven approach also helps in other ways, Capt. Lee Horton said.

"Research shows that officers just being visible in a given area, is the biggest deterrent to crime," he said. "Also, data will help VPD take a more focused approach to fighting crime as opposed to casting a wide net, which can sometimes have a detrimental impact on relationships in the community."

The shift in approach started in June 2016, with a partnership between the city and the U.S. Department of Justice, Office of Justice Programs Diagnostic Center, which provided technical assistance for data-driven strategies and solutions to combat crime and improve public safety, according to the news release.

The Center provided the Vallejo Police Department with a comprehensive diagnostic analysis of its hot-spots, ways to improve data collection, and opportunities for meaningful community engagement, it says.



"To assist in this process, Chief Bidou hired a crime analyst to produce and analyze Vallejo's crime data," Potts said. "Information provided by crime analysts is invaluable as research suggests that as much as 50 percent to 60 percent of all crime in any jurisdiction occurs at just 3 percent to 5 percent of locations."

The first data set the crime analyst produced revealed several hot spots for auto burglaries in Vallejo's Gateway Plaza shopping center, Potts said.

"VPD was already aware of auto burglaries in the plaza area, and for the past three years, the department conducted Holiday Patrols from Black Friday through Jan. 1," he said. "However, this year, we decided to try new strategies to deter burglaries and then collect data to evaluate the effectiveness of those strategies."

Vallejo police say new approach to car...

The department partnered with a New York University-based nonprofit research group that provides a Ph.D. case manager and a statistician for police departments committed to experimenting with evidence-based policing, Potts said. The case manager assesses a department's intervention strategy at no cost to the City, he said.

Armed with these partnerships and data, VPD launched a problem-oriented policing project to fight burglaries in the Plaza, officials said.

Aimed at reducing burglaries and ensuring Vallejo residents and visitors have "a safe, pleasant, and satisfying shopping experience," VPD used several crime-fighting strategies, including putting crime prevention awareness messages on electronic bulletin boards along Interstate-80 and an increased social media presence, Potts said.

Officers also passed out crime prevention flyers to shopping center merchants and patrons, increased holiday patrols, increased surveillance and used GPS trackers inside of bait devices disguised as unattended valuables, he said.

This strategy resulted in the arrests of five suspects wanted to burglaries all over the Bay Area, as well as the recovery of two firearms, Potts said.

The data shows that the project, called Hidelt.LockIt.Takelt resulted in a 39 percent drop in auto burglaries from Nov. 8 to Jan 1 compared to 2016, he said.

"During this intervention, officers made 21 arrests, issued 19 traffic citations, and 25 parking violations," he said. "VPD also partnered with Home Depot and Costco, both of which graciously provided valuable items that were used in conjunction with the GPS bait."

The Vallejo Police Department was among the first to work with BetaGov when it conducted a randomized controlled experiment to test the effectiveness of automatic license plate readers, the release said. The experiment will inform policy decisions for future acquisitions of similar technology, it says.

Horton said he's pleased with the project's outcome.

"The project went very well. We are looking forward to continuing similar projects to address different kinds of crime in the future," he said. "Chief (Andrew) Bidou is building a very solid platform which VPD can use to stay ahead of criminals into the future."

This is just the beginning, Horton said.

"Our crime analyst is busy looking for opportunities in the data," he said. "He is additionally fulfilling requests for data from patrol officers and detectives alike, as they work to solve crimes," and with the Center's ongoing training and expert consultation in many areas of data collection and analysis, "We are hopeful that we can expand these techniques into many areas of concern for our citizens."

This new approach promises to help the department be both more efficient and more effective, to better serve Vallejo's residents, Horton said.

"Our purpose in working to predict crime with data is not to do more with less, although that is sometimes the outcome. Rather, our purpose is to be more impactful and effective in reducing and preventing crime," he said, adding that the future of policing is "here and now."

<https://www.timesheraldonline.com/2018/01/12/vallejo-police-say-new-approach-to-car-burglaries-having-success/>



Twitter page - "HideitLockitTakeit" to increase social media awareness

Appendix I - Relevant YouTube Links

<https://www.youtube.com/watch?v=cqYQTjDfDxg&feature=youtu.be>

Watching thieves steal items from vehicles and then tracked utilizing GPS devices

<https://www.nbcchicago.com/news/local/chicago-englewood-bait-truck-490410441.html>

More videos about GPS bait

References

- BetaGov (2017). About BetaGov. Retrieved from <http://betagov.org/html/about-betagov.html>
- Boydston, J.E. (1975) San Diego Field Interrogation: Final Report. Washington, DC: Police Foundation
- Cambridge Center (2017, November 11). "A Conversation with Herman Goldstein" Cambridge Center for Evidence-Based Policing [YouTube]. Retrieved from <https://www.youtube.com/watch?v=XNS9d7Vghno>
- Clarke, R., V., (1995). Situational Crime Prevention. *Crime and Justice*, 19, 91-150.
- Cordner, Gary. (1981). "The Effects of Directed Patrol: A Natural Quasi-Experiment in Pontiac," in James J. Fyfe, ed., *Contemporary Issues in Law Enforcement*. Beverly Hills, CA: Sage, pp. 37-58.
- Eck, J. E., & Spelman, W. (1987). *Problem-solving: Problem-oriented policing in Newport News*.
- FBI Uniform Crime Reports (2016). Offenses known to California Law Enforcement. Retrieved May 16, 2019. From <https://ucr.fbi.gov/crime-in-the-u.s/2016/crime-in-the-u.s.-2016/tables/table-6/table-6-state-cuts/california.xls>
- Hawken, Angela. (2017, May 22). Oral Presentation at American Society of Evidence- Based Policing (ASEBP) Conference. Evidence-Based Policing Panel.
- Johnson, J. P. (2018). The Shoreline Cruise Light Experiment. Oral presentation at the Pracademics Conference, New York University, New York, April 9.
- Kelling, G., Pate, T., Dieckman, D., & Brown, C. E. (1974). *The Kansas City Patrol Experiment*. Washington, DC: Police Foundation.
- Klick, J., & Tabarrok, A. (2005). Using terror alert levels to estimate the effect of police on crime. *The Journal of Law and Economics*, 48(1), 267-279.
- Koper, C. S., Egge, S. J., & Lum, C. (2015). Institutionalizing place-based approaches: opening 'cases' on gun crime hot spots. *Policing: A Journal of Policy and Practice*, 9(3), 242-254.
- Lee, B. A., Iceland, J., & Sharp, G. (2012). *Communities Over Three Decades*. Retrieved from <https://s4.ad.brown.edu/Projects/Diversity/Data/Report/report08292012.pdf> (accessed 24 May 2018)

- Lum, C. (2014, February 5). The Center for Evidence-Based Crime Policy – Introduction to Evidence-Based Policing. Retrieved from <https://www.youtube.com/watch?v=ICfZlxTm0Os>
- Lum, C. M., & Koper, C. S. (2017). Evidence-based policing: Translating research into practice. Oxford: Oxford University Press.
- McKinley, J. (May, 2008). "City Council in Bay Area Declares Bankruptcy." *New York Times.com*. Retrieved from <http://www.nytimes.com/2008/05/08/us/08bankrupt.html> (accessed 24 May 2019)
- Mitchell, Renee. (2019, May 19). Oral Presentation at American Society of Evidence-Based Policing (ASEBP) Conference. Evidence-Based Policing Workshop.
- OJP Diagnostic Center. (April, 2017). Diagnostic Analysis for the Vallejo Police Department. *Opportunities for Evidence-Based Technical Assistance*
- Potts, J. (2018). How a California Agency's Theft Deterrent Strategies Led to a 40% Decline in Auto Burglaries. *Police One*. Retrieved from <https://www.policeone.com/evidence/articles/478243006-How-a-Calif-agencys-theft-deterrent-strategies-led-to-a-40-percent-decline-in-auto-burglaries/> (accessed 24 May 2019)
- Potts, J. (2019). 5 Examples of How Evidence-Based Policing Enhances Law Enforcement. *Police One*. Retrieved from <https://www.policeone.com/police-training/articles/483190006-5-examples-of-how-evidence-based-policing-enhances-law-enforcement/>
- Sernoffsky, E. & Alexander, A. (September, 2015). "U.S. crime drops again, but gains uneven in Bay Area." *San Francisco Chronicle*. Retrieved from <https://www.sfchronicle.com/crime/article/U-S-crime-drops-again-but-gains-uneven-in-Bay-6536129.php>
- Sherman, L., Gratin, P., and Buerger, M. (1989). Hot spots of predatory crime: Routine activities and the criminology of place. *Criminology* 27(1), 27-56.
- Sherman, L., W., (1990). Police Crackdowns: Initial & Residual Deterrence. *Crime and Justice*, 12 1-48.
- Sherman, L., Gottfredson, D., MacKenzie, D., Eck, J., Reuter, P., & Bushway, S. (1997). Preventing crime: What works, what doesn't, what's promising: *Corrections Forum*; Nov/Dec 1998; 7, 6; Pro Quest Criminal Justice pg. 19

Sherman, L. W. (2013). The Rise of Evidence-Based Policing: Targeting, Testing, and Tracking. *Crime and Justice* 42(1), 377–451.

Weisburd, D. & Eck, J. E. (2004). What can police do to reduce crime, disorder, and fear? *The Annals of the American Academy of Political and Social Science*, 593, 42- 65.