

# **DATA-DRIVEN APPROACHES TO CRIME AND TRAFFIC SAFETY (DDACTS)**

## **CASE STUDY OF THE LAFOURCHE PARISH, LOUISIANA, SHERIFF'S OFFICE DDACTS PROGRAM**



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# LAFOURCHE PARISH, LOUISIANA

## DISTINGUISHING FEATURES

Political considerations can present obstacles to vigorous traffic enforcement for sheriffs throughout the country who depend on reelection. This report describes how a particularly innovative sheriff of a rural Louisiana parish responded to rising crime and crash rates by implementing a data-driven approach to crime and traffic safety using low-tech methods that are available to every law enforcement manager.

## SETTING

“Lafourche” comes from French meaning “the fork,” referring to the way the Bayou Lafourche once split from the Mississippi River. The parish of the same name, through which the bayou courses, was created in 1807 in the original division of the Louisiana Purchase. The inhabitants of Lafourche Parish were descendants of Spanish and French settlers who arrived in the middle of the 18<sup>th</sup> Century, among them refugees of the expulsion of the Acadians from the Atlantic Northeast by the British governor of Nova Scotia in 1755. As the community grew, the original parcels of land were split into narrow strips so each would maintain access to the bayou, creating a series of narrow but deep, ribbon-shaped plots abutting the waterfront. The row of houses earned the stretch that would become the Louisiana Highway 1 the nickname “the longest street in the world.” At the time, Bayou Lafourche was still connected to the Mississippi River and remained so until it was dammed in 1905.<sup>1</sup>



Lafourche Parish, which celebrated its bicentennial in 2007, occupies a narrow strip approximately 70 miles long by 20 miles wide encompassing 1,472 square miles, a quarter of which is water, in the southeast of Louisiana, just west of the Mississippi River; Lafourche Parish dips into the Gulf of Mexico south of New Orleans and is bisected by the bayou from which it draws its name. The population has grown steadily during the past three decades and is now estimated to be 93,000 people, 15,000 of whom reside in the parish seat, Thibodaux.

Nearly one in five residents speaks some form of French in the home and the community is proud of its Acadian heritage, which is reflected by the number of festivals that are held annually to celebrate the local Cajun cuisine and culture.<sup>2</sup> Thibodaux hosts an active theater company and is the location of Nicholls State University, named for reconstructionist governor of Louisiana and Thibodaux native, Francis Nicholls. Thibodaux was also the home of Edward Douglass White, who served as a justice of the United States Supreme Court from 1894 to 1921, his last decade as Chief Justice. The city’s name is mentioned in several country songs, including the famous “Jambalaya (On the Bayou)” by Hank Williams.



<sup>1</sup> Louisiana is divided into parishes in the manner that 48 of the United States are divided into counties (Alaska is divided into boroughs and census areas). Local government during the French period in Louisiana was based on ecclesiastical divisions called *paroisse*, or parish, in French and the term was retained after statehood.

<sup>2</sup> The Jean Lafitte National Park Wetlands Acadian Cultural Center in Thibodaux is devoted to the history of the Acadians who settled along the bayous and wetland swamps of southeastern Louisiana.

A project is underway to reconnect the Bayou Lafourche to the Mississippi River, though with pragmatic water flow controls to prevent flooding. Bayou Lafourche remains the heart of Lafourche Parish. It supplies 300,000 Louisiana residents with drinking water, irrigates and fertilizes the sugar plantations, and is the natural and recreational center for the region. In addition to the growing and refining of sugarcane, many residents of Lafourche Parish are employed in shipbuilding, and on the Gulf of Mexico, commercial fishing and oil and gas production.



## BACKGROUND

Rural Louisiana is known for its distinctive culture, reinforced by a French dialect and characterized by unique culinary and musical styles, and large extended families that form networks bound by blood and affiliation throughout the region. It is a vestige of the preindustrial past when everywhere kinship was the primary mechanism of social order and influence. Outsiders sometimes report that it is like visiting a different country and there is much truth in that observation. A distinction that is particularly relevant to the current study is Louisiana's legal system, which is derived from the Civil Code established by Napoleon in 1804. The state's system of "civil law" differs from the "common-law" traditions of the other 49 states in methodology and the power bestowed on courts. Rulings in a common-law system are influenced substantially by legal precedent, while rulings in the French-influenced civil system are made on the basis of judges' interpretations of the law. Empowering judges to decide cases without reference to precedent was originally intended to preserve individual freedom, but was accompanied by a *de facto* presumption of guilt. That is, in Louisiana a person is guilty until proven innocent, not the other way around.<sup>3</sup>



Built in 1856, the Lafourche Parish Courthouse is one of Louisiana's four functioning Antebellum courthouses.

A sheriff is the chief law enforcement officer in each of Louisiana's 64 parishes and is expected to provide a first response capability for all matters criminal and civil. Sheriffs also are the keepers of the local jails, which house felony and misdemeanor prisoners, and they serve as the official tax collectors for the parishes; it is a position with considerable authority. Before the current sheriff was elected, the office had been subject to ongoing state and federal investigations for several years and the two preceding sheriffs and top members of their staffs served prison sentences for crimes committed while in public office. When Craig Webre was elected Sheriff in 1992, he announced that, "Today marks the beginning of a new era of accountable, responsible and professional law enforcement in Lafourche Parish." He promptly fired nearly one-third of the sworn personnel, put everyone who remained in uniforms, and began an evaluation of individual and agency capabilities. Before Webre, deputies were not allowed to issue a citation or make an arrest without first obtaining a commander's permission, which rarely was granted; deputies did not even carry citation books. Lafourche Parish led the state in DWI fatalities at that time, so within two years the new sheriff directed Todd Diaz, a survivor of the initial "house cleaning," to develop a traffic enforcement unit to counter the rising numbers of crashes. The agency's ongoing commitment to improving traffic safety (and several awards) resulted from his efforts.

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<sup>3</sup> The Napoleonic Code and its derivatives have been described as an "inquisitorial method," in contrast to the "adversarial method" of British and American justice in which a person is presumed innocent until proven guilty.

Since his election in 1992, the sheriff consolidated offices; centralized several functions; replaced antiquated vehicles and equipment; upgraded existing services and added others; established new training requirements and standards of professional conduct; and, was reelected four times. In the year 2000, the Lafourche Parish Sheriff's Office (LPSO) became the second sheriff's office in Louisiana to receive national accreditation; Captain Todd Diaz was named the 2003 Deputy Sheriff of the Year by the National Sheriff's Association (NSA); and in 2005, Lieutenant Karla Beck of the LPSO's Police Social Services Section was presented the first NSA National Crime Victims' Services Award. Sheriff Webre led the transformation of the LPSO into a modern law enforcement agency and served as NSA president in 2007 - 2008.<sup>4</sup>

## **PLANNING PROCESS**

Todd Diaz, now with the rank of major and head of the LPSO's Criminal Department, learned of the NHTSA/DoJ DDACTS initiative, was immediately interested, and asked Scott Silverii, Captain of the Patrol Division, to investigate. Captain Silverii attended a briefing that described DDACTS, but was initially discouraged by the presenters' emphasis on technology, computerized databases, and mapping systems. The LPSO possesses modern equipment, but not the specialized software and analytical staff that are common to large urban and statewide law enforcement agencies. He was relieved to learn later during the briefing that the DDACTS method also can be implemented using a paper map, old fashioned push pins, and a stack of index cards, if necessary. Captain Silverii returned to Lafourche Parish eager to give it a try.<sup>5</sup>

The captain's enthusiasm was dampened by his initial encounter with the LPSO's records management system, which had limited export capabilities and clearly was not designed to support the requirements of a data-driven approach to policing. The system contained the information that he needed, but retrieving it usually required manual counting and categorizing of records and transcribing the tallies into an Excel spreadsheet to enable collation and analysis. The data led Silverii to identify traffic crashes and fugitive apprehensions as targets of the LPSO's DDACTS program, despite the system's limitations. He used a paper map to plot the incidence of crashes and criminal activity in the parish and then identified two "hot spots" where crimes and crashes overlapped, designating them internally as DDACTS Central and DDACTS South. A temporal analysis of the data revealed two-hour periods of peak activity in both areas, which were largely confined to weekdays.

Selection of the exact locations for special enforcement was constrained by Lafourche Parish's unique geography. Louisiana Highways 1 and 308 run parallel for nearly the entire length of the jurisdiction and are separated by the narrow Bayou Lafourche. The proximity of the two-lane highways to the bayou limits and at some locations eliminates the roadside shoulder. This dangerous condition routinely results in traffic crashes becoming water rescue operations. Thus, the selection of DDACTS hot spots was restricted to road segments with wider margins where deputies could make enforcement stops safely.

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<sup>4</sup> The sheriff's innovative approach extends beyond the normal limits of law enforcement. For example, when the popular "meals on wheels" program was threatened by high costs, he offered the services of the Lafourche Parish Detention Center, which now provides hot meals to senior citizens and to students in the Head Start program throughout the parish. The agency also developed support services for elderly victims and was the first sheriff's office in the US to offer a facility dedicated to transferring children between estranged parents for visitation purposes; a professionally-staffed Parents and Children Together (PACT) center, which features separate entrances for mothers and fathers, replaced acrimonious and unsupervised meetings in parking lots.

<sup>5</sup> Captain Scott Silverii is currently writing a PhD dissertation concerning the processes by which law enforcement personnel become acculturated and adapt to the values, customs, and stresses of their vocation.

Another constraint to the selection of special enforcement areas is the abrupt ending of LA 308 in the southern portion of the parish; approximately one mile beyond Golden Meadow all traffic is diverted onto LA 1, which is the only land route into and out of Port Fourchon, one of the nation's critical oil and offshore industrial areas. This two-lane highway is travelled by the full range of vehicles, from passenger cars and pick-up trucks pulling recreational fishing boats to 18-wheelers hauling heavy equipment and materials bound for oil platforms in the Gulf of Mexico. Crashes on this heavily-traveled segment block the narrow roadway and the absence of a shoulder prevents vehicles from bypassing the obstructions, which effectively freezes all movement of people and commerce for many miles in both directions.

### **Mission Statement and Goals**

The LPSO established both outcome and administrative goals for the agency's DDACTS program. The outcome goals were to increase the number of fugitive apprehensions in the two DDACTS areas by 10 percent and to reduce the number of crashes by 25 percent and the incidence of Part I crimes as much as possible. Administrative goals included, 1) establish partnerships with traditional and non-traditional entities to help implement innovative approaches to improving traffic safety; 2) develop an on-line Daily Activity Report (DAR) to capture all DDACTS activities for analysis; 3) investigate the feasibility of incorporating technological solutions, such as mobile data computers and real-time video to help identify individuals in the field; 4) improve the data capture, analysis and dissemination of enforcement and intelligence information by use of an enhanced records management system that includes hardware and software consistent with guidelines established by the International Association of Law Enforcement Intelligence Analysts (IALEIA).

### **Operational Plan**

Captain Silverii described the operational plan in the following numbered paragraphs.

1. The mission is to staff each of the designated DDACTS sites with at least one deputy for two hours per day, for the designated five days per week, in order to provide intensified traffic enforcement within the boundaries of the DDACTS areas.
2. During the course of this two hour period, the primary designated DDACTS deputy will proactively pursue traffic law violators and take appropriate enforcement actions.
3. The deputy will contact all persons in the vehicle during an enforcement stop for the purpose of identifying those with outstanding warrants.
4. If the primary assigned deputy must exit the DDACTS area, the assigned secondary deputy will move into the DDACTS area to continue the intensified traffic enforcement operation until the primary deputy returns or the end of the two-hour special enforcement block.
5. All activities will be recorded on the designated DDACTS Activity Sheet.
6. The DDACTS deputy will remain in the designated area for the duration of the assignment and will not be redirected by dispatch to handle Calls for Service (CFS) during this period. Shift commanders will ensure that appropriate personnel are in place to handle CFS or the supervisors themselves will respond to the calls to support the DDACTS operation.
7. No DDACTS deputy will be diverted from a scheduled DDACTS assignment without first receiving authorization from the Patrol Division Commander.

## **ENFORCEMENT METHODS / FREQUENCY OF OPERATIONS / DURATION OF PROGRAM**

Deputies were selected for the special patrols who had performed well during previous special operations and had demonstrated a commitment to traffic enforcement. The deputies were briefed on the purposes and methods of the DDACTS program and were assigned to the two DDACTS areas on a rotational basis to increase the likelihood that both areas would receive comparable treatment, overall. Deputies were equipped with radar, window tint meters, and noise measuring devices and instructed to 1) conduct vigorous traffic enforcement patrols within the boundaries of the assigned DDACTS area; and 2) conduct warrant checks of drivers and passengers contacted to identify wanted persons. The LPSO also is reviewing records to identify fugitives who reside within the two DDACTS areas and individuals with outstanding warrants for failing to appear in court for DWI offenses. Special operations will be conducted to target these individuals.

The LPSO began DDACTS enforcement activities in March 2009 and agency managers intend to continue the special operations indefinitely. The model has been integrated into the standard operating procedures of all four uniform patrol shifts as a practice that contributes to efficient and effective policing. For example, Captain Silverii plotted the incidence of alcohol-involved crashes geographically and by hour and day of the week, which led him to identify weekdays between 4:00 PM and 9:00 PM as the periods of peak DWI activity. The four deputies of the LPSO's DWI task force were reluctant to deploy so early in the evening because it conflicted with their presumptions and previous DWI patrol experience. However, all skepticism was eroded within two days of switching to the data-driven deployment schedule by the deputies' observations and the numbers of arrests made.

All shift lieutenants are now encouraged during the LPSO's monthly CompStat meetings to apply the DDACTS method in their areas of responsibility and to measure and report the results to their colleagues. The method also has been applied on a limited basis in other departments of the agency.

## **PARTICIPATION**

The LPSO is the primary law enforcement agency in the parish and is conducting the DDACTS program alone.

## **PUBLIC AWARENESS/PROGRAM VISIBILITY**

Press releases are issued periodically and information about the LPSO's DDACTS program has been included in local newspaper articles and the program has been discussed on local radio talk shows. In addition, LPSO personnel have described the program to the Lafourche Parish Safe Communities Committee and at the Safe Communities Traffic Safety Summit.

## **FUNDING**

The LPSO has paid all costs associated with the program from the agency's operating budget, including salaries and overtime, vehicle expenses, equipment purchases, training, and certification fees.

## **LESSONS LEARNED**

The LPSO has realized the benefits of applying limited resources towards a specific objective. Data-driven enforcement challenges the traditional reactive policing paradigm. However, the value added by the method is readily apparent and has fostered an atmosphere within the agency that encourages creativity and proactive policing. The method is defensible, effective, and produces results with minimal investments of time and other resource.

LPSO managers discovered that it is important to monitor individual deputy performance to ensure that the special enforcement activity is conducted according to the operational plan. The “big picture” objective can become lost in the details of daily assignments, but LPSO managers found that continual support, displays of operational effectiveness, and regular debriefings of participating deputies helped maintain the motivation necessary to conduct sustained special enforcement and to use enforcement stops to identify criminal activity and wanted persons.

The LPSO demonstrated that a data-driven approach to crime and traffic safety could be planned, implemented, and evaluated without specialized records management systems or automated mapping software.

### **OBSTACLES**

The limitations of the agency’s records management system (RMS) presented the first obstacles encountered during the planning process and then it was discovered that dispatchers had been inconsistent in their recording of locations and addresses for crimes. Manual transcription of data into spreadsheets solved the RMS problem, and new procedures and a command emphasis on attending to details improved the consistency of location information.

The LPSO obtains crash data from the Louisiana State Police (LSP) because the LSP maintains the crash records for all law enforcement agencies within the parish (and state). Reliance on the LSP for crash data limits the LPSO’s ability to generate the timely reports that are necessary to monitor the effects of special enforcement effort.

It was discovered after several weeks that the deputies assigned to the special duty had become complacent and were no longer motivated to conduct the aggressive, high-visibility, sustained effort described in the operations plan. In response, Captain Silverii began rotating the DDACTS assignments among the deputies who work in the areas surrounding the special enforcement zones. Rotating the assignments prevents any one deputy from becoming bored with the task and more deputies now share “ownership” of the program than before.

### **PROGRAM STRENGTHS**

DDACTS has had the unexpected effect of increasing traffic enforcement activity throughout the parish. Deputies learned about the DDACTS program from agency announcements and colleagues who have been assigned to the special patrols, which sparked an informal competition, or at least the motivation to not be outdone by deputies in other areas of the parish. Eventually, patrol shift commanders began submitting operations plans to address hot spots they had identified outside the two initial DDACTS areas.

A primary strength of the LPSO’s DDACTS program is that it has been planned and conducted without special funding, which means that the special enforcement effort can be sustained long enough to create persistent general deterrence effects.

### **SUGGESTIONS FROM THE PROGRAM ORGANIZERS**

The availability of experts during the planning of the program would have facilitated and reduced the time consumed by the process. Months were spent trying to decipher information concerning geospatial mapping and sophisticated software tools, and then tolling over data sets, independent variables, project initiatives, and enforcement methods. A misperception that the project was beyond the agency’s capability delayed our progress. A mentor would have helped us realize that the DDACTS method can be implemented without special technology.



## EVIDENCE OF PROGRAM EFFECTS

### CRASHES

The Lafourche Parish Sheriff's Office conducted the special enforcement component of its DDACTS program from April through September 2009. Data are presented in the following figures and table for the six-month program period and for the same months during the preceding year.

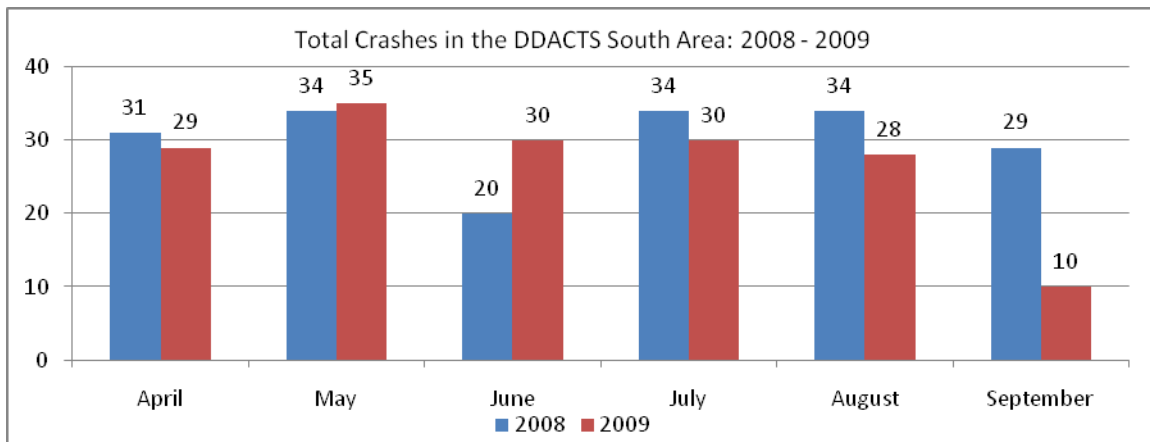
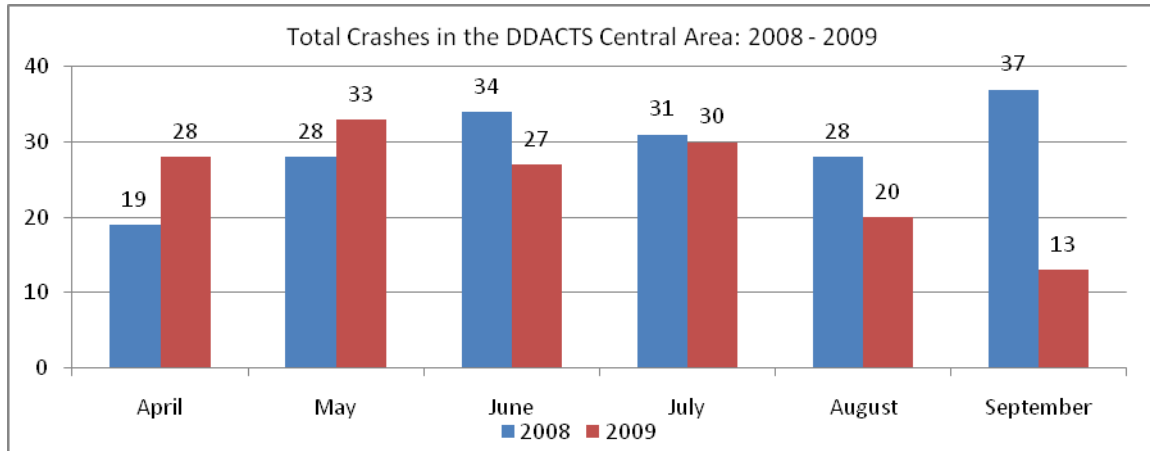


TABLE 1

TOTAL CRASHES IN THE DDACTS AREAS DURING APRIL – SEPTEMBER 2008 - 2009

Area	2008	2009	Percent Change 08-09
DDACTS Central	177	151	-14.7%
DDACTS South	182	162	-11.0%
DDACTS Areas Combined	359	313	-12.8%
All Other Areas of the Parish	1,064	915	-14.0%

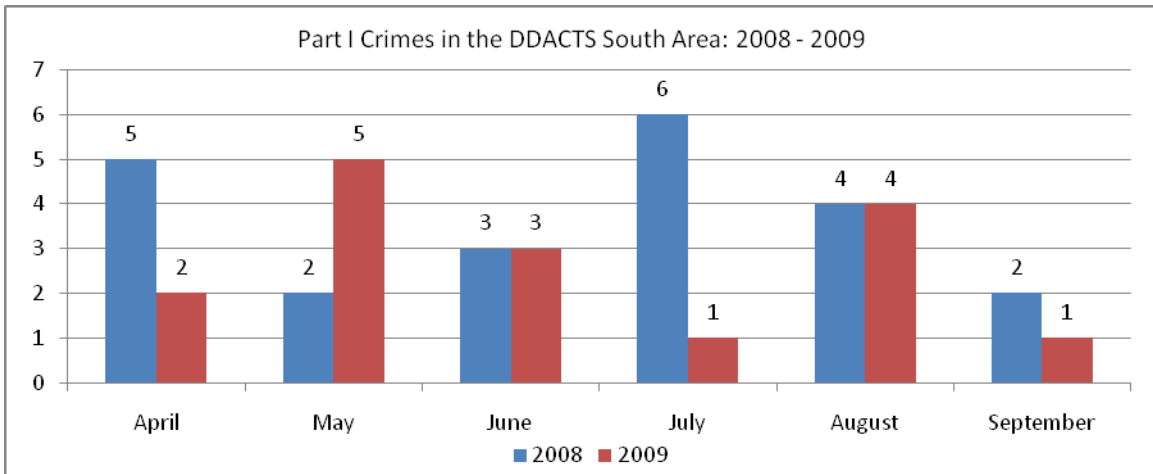
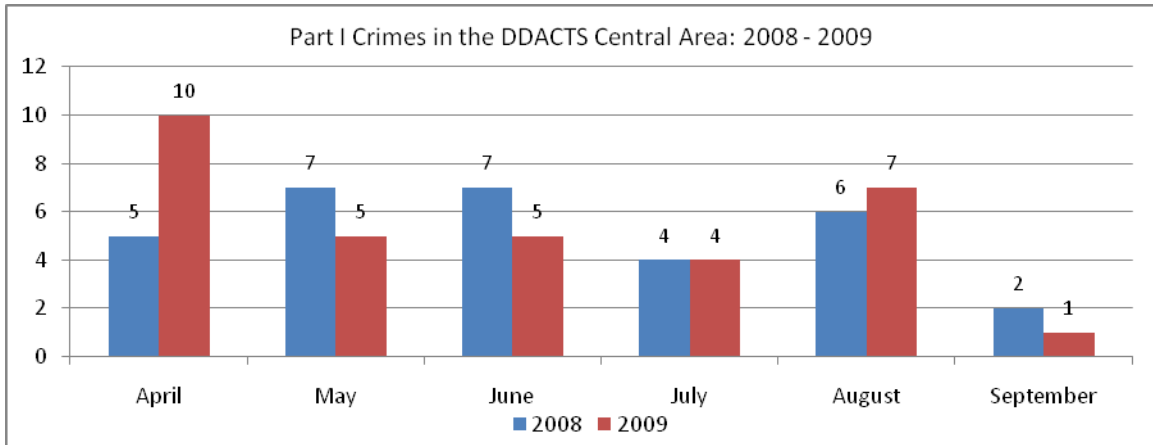
Source: Lafourche Parish Sheriff's Office

The table shows that there were 26 fewer crashes in the Central Area and 20 fewer crashes in the South Area during the six-month program period, compared to the same months of 2008. These differences represent 14.7 and 11 percent reductions in crashes in the Central and South Areas, respectively, and a 12.8 percent reduction overall in the DDACTS special enforcement areas. Crashes in all other areas of the parish combined declined by 14 percent.

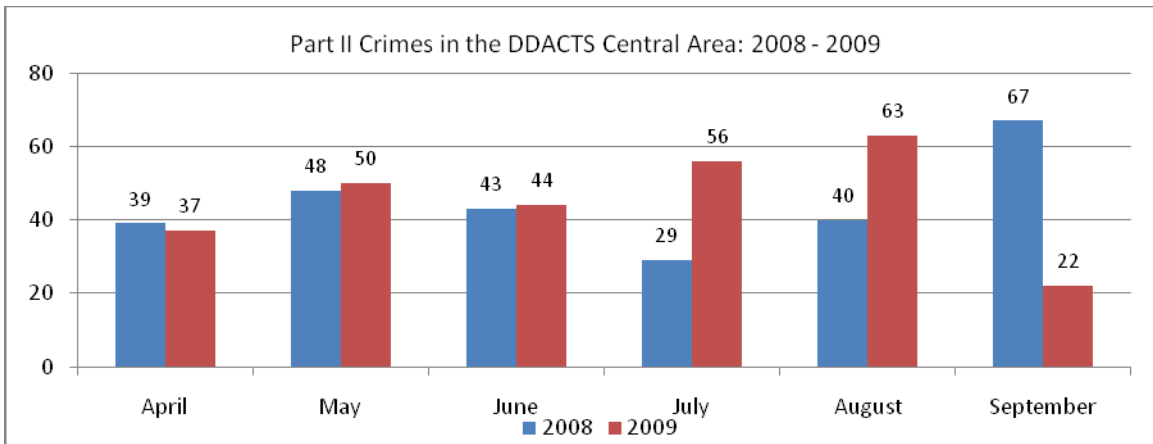


## CRIME

The following two figures show the numbers of Part I crimes in the two DDACTS areas during the six-month program period and during the same months of the preceding year. Part I crimes include murder, forcible rape, and simple and aggravated battery.



The following two figures show the numbers of Part II crimes in the two DDACTS areas during the six-month program period and during the same months of the preceding year. Part II crimes include robbery, burglary, theft, motor vehicle theft, and arson.



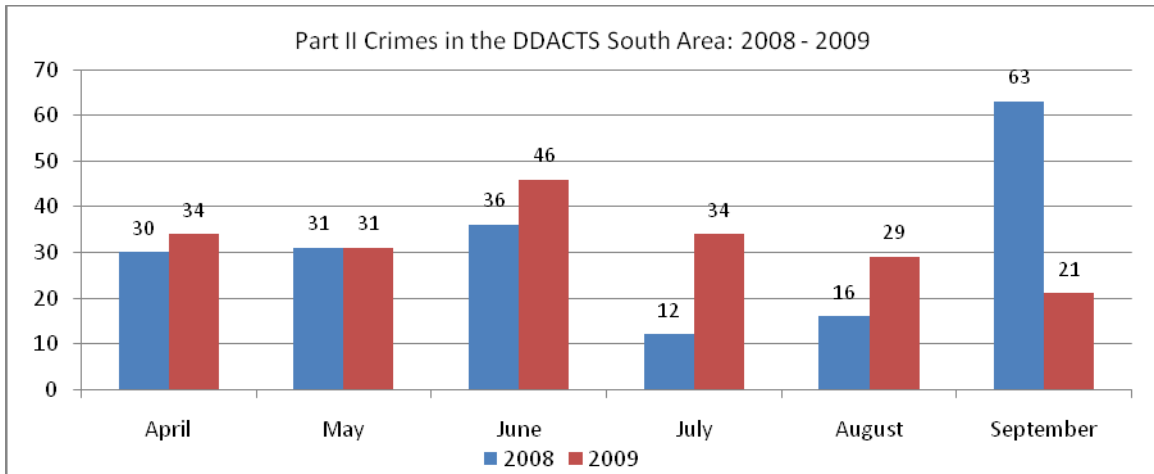


TABLE 2  
CRIMES IN THE DDACTS AREAS DURING APRIL – SEPTEMBER 2008 - 2009

Area	2008	2009	Percent Change 08-09
DDACTS Central Part I	31	32	+3.2%
DDACTS South Part I	22	16	-27.3%
DDACTS Part I Combined	53	48	-9.4%
All Other Areas of the Parish Part I	95	116	+22.1%
DDACTS Central Part II	266	272	+2.3%
DDACTS South Part II	188	195	+3.7%
DDACTS Part II Combined	454	467	+2.9%
All Other Areas of the Parish Part II	678	675	+0.4%
DDACTS Areas/Crimes Combined	507	515	+1.6%
All Other Areas/Crimes Combined	773	791	+2.3%

Source: Lafourche Parish Sheriff's Office

TABLE 3  
SPECIAL ENFORCEMENT EFFORT IN THE DDACTS AREAS DURING APRIL – SEPTEMBER 2009

Patrol Hours	Enforcement Stops	Warnings Issued	Citations Issued	Persons Checked	Warrant Arrests
524	667	471	194	715	22

Source: Lafourche Parish Sheriff's Office

Part I crimes in the DDACTS areas declined by 9.4 percent overall during the special enforcement period, compared to the same months of the previous year; in contrast, Part I crimes increased by 22.1 percent in all other areas of Lafourche Parish combined. However, Part II crimes increased in the DDACTS areas by approximately 3 percent and remained essentially unchanged throughout the other areas of the parish. Overall, crime increased by 1.6 percent in the DDACTS areas and by 2.3 percent in the areas in which no special enforcement was conducted.

## FINAL NOTE

The managers of the Lafourche Parish Sheriff's Office are encouraged by the study's objective results and by the effects of the DDACTS approach on motivation and individual initiative. Captain Silverii used spreadsheets and paper maps to identify "hot spots" and, as a consequence, personnel throughout the agency were inspired to use temporal and spatial information about crashes and crimes to focus enforcement effort rationally. The LPSO is in the process of installing a new records management system that will facilitate the collection and analysis crash and crime data. Agency managers are eager to continue their DDACTS efforts supported by the capabilities of the new technology.

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