

2

Association of Transportation Safety Information Professionals

2002 Traffic Records Best Practice Application Form

Part 1 - Project Summary

PROJECT TITLE: TrafficStat Program

APPLICATION ORGANIZATION:

Lead Agency: Louisiana State Police-Troop C
Nominating Person: Darrin J. Naquin
Title: Sergeant
Project Manager: Captain Ralph D. Mitchell, Jr.
Agency: Louisiana State Police
Office: Troop C
Address: 4047 West Park Ave.
City, State, ZIP Gray, LA. 70359
Telephone: (985) 857-3680
FAX: (985) 857-3679
Email: dnaquin@dps.state.la.us

Identify to which national agenda goal(s) this applies:

- Goal #1- To instill the value of highway safety information systems.
- Goal #2- To establish a means by which collection, management, and use of highway safety information could be coordinated.
- Goal #3- To integrate the planning of highway safety programs and highway safety information systems.

Was this item to be addressed according to your traffic records committee's strategic plan? If yes, which item.

All three of these goals were addressed as part of our strategic plan.

PROJECT COST:

Planned: \$15,000 Actual:\$15,000

Project benefits: (Both Tangible And Intangible)

Reduction of Crashes
Feeling of Mission
Supervisor Accountability
No Surprises
Procedural missteps are exposed
Investment in Patrol Area
Minimal Cost to Department
Entire Troop working toward goals and outcomes.
Does not rely on task force concept.
Follow-up and accountability.
Manpower on patrol at times of high crash exposure
Evaluation of Effectiveness

PART 2 - PROJECT DETAIL

NARRATIVE

Please describe the scope of the project and how it relates to the 6 Goals of the 'National Agenda for the improvement of highway safety information systems'.

Troop C'S Commander believes that vehicle crashes and traffic congestion have a significant effect on the quality of life of all residents and visitors of Louisiana. He instituted a program aimed at reducing the number of crashes and improving the flow of traffic in the Troop C area. The program is called TrafficStat. The TrafficStat system is used as a tool to implement the Five E's (Engineering, Enforcement, Education, Emergency Response, and Everyone Else) at locations throughout the Troop area that are identified as crash-prone. The identification process, along with an analysis of crash factors and suggestions for correcting unsafe conditions, takes place at monthly "Traffic Strategy" meetings.

The goals and objectives of the TrafficStat program are:

- Identify locations throughout the Troop where crashes are most likely to occur.
- Design an effective crash analysis program to determine the primary factors that contribute to traffic crashes at these locations, and to maintain constant analysis so that problems can be addressed immediately.
- Develop effective countermeasures to correct hazardous conditions
- Implement a public information and education campaign, to help the public avoid traffic dangers and crash risks.
- Institute a highway incident management program, which includes training for all emergency responders.
- Develop and sustain cooperative partnerships with DOTD, community groups and other law enforcement agencies.

We believe that the goals and objectives of the TrafficStat program are consistent with the goals for improving highway safety information systems.

Describe the major process steps that you went through to do this project:

After deciding that TrafficStat was the right program to fit our needs we began working toward accomplishing our goals. The first goal, to identify locations throughout the Troop where crashes were most likely to occur, was mainly a statistical search. This statistical search sent three Troopers delving into thousands of crash reports to extract the data needed to implement this TrafficStat program. This search was divided into three distinct phases:

- 1) Phase 1 – Location of the Crash
- 2) Phase 2 – Time of the Crash
- 3) Phase 3 – Exhaustive Analysis of the Cause

The first step, identifying the location of the crash, is imperative. By knowing where crashes are occurring, we would then be able to saturate the area with Troopers. To identify these locations we looked at the number of crashes that had occurred over the past three years, solicited input from road Troopers familiar with the area, and also analyzed complaints from the public. Factors that were included in labeling these areas were:

- 1) Number of crashes
- 2) Number of hazardous moving violations committed
- 3) Amount of traffic
- 4) Design of the roadway of that particular area.

Instead of labeling these areas as "High Crash Areas" (since other factors were used) a more promising approach was used. They are now known as "Locations of Promise." But simply sending a group of Troopers haphazardly to specific areas was still counter-productive. A high visibility of Troopers needed to be maintained when the violations and crashes were most likely to occur.

The second phase, identifying the time of the crash, gave us more information. This phase included pinning down the times not only of when most crashes were occurring, but also when these areas would see an influx of vehicular traffic, thereby increasing the possibility of crashes.

We then knew what days of the week and what times of day the crashes and congestion were occurring, but we still needed to know why. This led us to the third phase, which was an analysis of the causes of these crashes. By delving into hundreds of crash reports over the last three years, we came up with a pretty good understanding of the reasons for these crashes. On each of these reports we searched for the causative factors. The compiled information included the statute violation as well as other factors that may have played a role, such as vision obscurement, driver fatigue, roadway conditions, and of course, driver alcohol usage.

We then moved toward our second goal, which was to design an effective crash analysis program and to develop a plan which would allow constant analysis of our crashes and enforcement activities. With little monetary resources to assist us in developing a crash database, we were forced to look within our existing computer systems. Each state police troop maintains a computerized desk log, which is used to log crashes, incidents and other activities that may take place during the course of a shift. Desk log entries for crashes included basic information such as time and location, but lacked details needed for proper crash analysis. Working with our data section we were able to add data fields to the desk log which enabled us to better understand what kinds of crashes were occurring. Fields such as the manner of collision (rear end, head on, etc) and primary factor causing the crash were added to the database using code letters found on Louisiana's Crash Report Form. Our data section was also able to develop a method which allowed us to query the desk log database to gather crash information. Using these methods we are able to obtain all the information on crashes at a specific location during a specific time span. We can then export that information into a spreadsheet where it can be broken down into more specific categories, such as day of week, hour of day, and alcohol related crashes.

Once the crashes have been broken down, we can provide easy to understand information to our patrol Troopers, who then have a better idea of when and how they should conduct their enforcement activities. This information is also put to use when determining the types and locations of enforcement details. Troopers and supervisors can then implement enforcement details based on the days of week and times of day when crashes are most likely to occur. Each individual location is also broken down by type of crash and violations, so that Troopers can develop a plan of action to enforce the violations which contribute to most crashes at that location. We firmly believe that our program would not be successful if it were not for the dedication and work of our Troopers. In the past Troopers used to report to work and drive around looking for violations. With the implementation of our TrafficStat program every Trooper is now actively involved in the process. TrafficStat manuals are given to all of our Troopers. These manuals contain detailed descriptions of each "Location of Promise" including traffic counts, times when crashes are most likely to occur, most common violations, and land and aerial photographs of that particular location. Troopers now feel a sense of mission when they report to work. These manuals are constantly updated with quarterly newsletters which detail crashes and incidents that occur in these locations, as well as other areas of interest throughout the Troop. The newsletters also contain information on all fatality crashes, DWI arrests, and alcohol related crashes. All crashes are constantly analyzed using the databases, so that problem areas can be identified and addressed immediately. In addition, Traffic Strategy meetings are held on a monthly basis. The Troop Commander, Shift Lieutenants, TrafficStat committee and at least two Troopers from each shift attend these meetings to discuss problems and offer solutions. The information discussed

is then passed on to the remainder of shift personnel. Troopers now know where to go and at what times to effectively reduce traffic crashes.

The TrafficStat program is continuing to develop. With the assistance of our local Municipal Planning Organization we have been able to purchase mapping software which will allow us to visually analyze crash data. This software will not only assist the TrafficStat manager in organizing and analyzing crash information, but will also allow individual troopers to make queries from their patrol cars. A program called Beat Book will be installed on every Trooper's in-car computer, which will allow them to view crash data and conduct their own inquiries while working in the field. The Beat Book application will also enable Troopers to input data into the program, so they can track individual arrest, citation, crash information and other types of data, such as location of licensed alcoholic beverage outlets.

The remaining goals of the TrafficStat program were accomplished by using the five E's of highway safety. Our TrafficStat program is mainly a tool used to implement the five E's, which are Enforcement, Engineering, Education, Emergency response, and Everyone else. These five E's form the basis of what we believe is necessary for a well designed traffic safety initiative.

The third and fourth goals of the TrafficStat program were to develop effective countermeasures to correct hazardous conditions, and to implement a public information and educational campaign. These goals have been accomplished using the first three E's: enforcement, engineering, and education.

Enforcement – Studies have shown that firm but fair enforcement of the laws result in more compliance. Motorists are more apt to comply with traffic laws when there is a significant chance of receiving a citation. More compliance in traffic laws results in fewer crashes. Troop C's enforcement efforts are directed largely towards our TrafficStat locations. Through our research we have identified the most common violations which contribute to crashes at these locations, and we have also identified the time of day and day of week when these crashes are most likely to occur. We then take that information and target unsafe driving violations at the specific times of day and days of week.

Engineering – We at Troop C work very closely with the local and state offices of the Louisiana Department of Transportation and Development (LA DOTD). We seek recommendations from road Troopers and then pass these recommendations to DOTD in hopes that any problems or potential problems can be corrected immediately. We also address the public's concerns and ideas and work towards a solution. At the beginning of the program we received numerous calls from local residents concerning a major local business. Their concerns included high traffic volume, speeding, racing, aggressive driving, and major hazardous violations such as passing on the shoulders and running stop signs. These violations were occurring at the end of the day when workers were trying to get home. We set up a meeting with executives of this business, and were able to suggest a long-term solution to the problem. We then met with the DOTD officials, who agreed with our suggestion, and implemented the changes. The solution was to relocate two stop signs, which allowed outgoing traffic to continue flowing. Since the improvements we have received positive feedback, including a letter from an employee thanking us for making him safer.

Education – This includes all aspects of educating the public. Extensive media campaigns and safety talks to local schools and businesses are also an important part of our TrafficStat program. From the information obtained from these congested areas, we also targeted certain businesses and schools that are near our TrafficStat locations. We firmly believe that when the public truly understands the purpose, tactics, and philosophy of a law enforcement agency, the results are smoother interactions with the public and more cooperation.

Our fifth goal was to institute a highway incident management program for all emergency responders in our Troop area, which we accomplished as part of the 4th E, which is emergency response:

Emergency Response – For every 10 minutes that a roadway is blocked, there is a 1% increase in the likelihood of a secondary crash. Troop C investigates over 4,000 crashes a year, and we felt this was an area we needed to explore. Secondary crashes are devastating to not only those directly involved. Businesses suffer a negative economic effect when highways, which are their trade routes, are closed. When the transportation of goods is delayed on our highways, the result is a loss of income to our local businesses. Part of our TrafficStat program has been the implementation of a Highway Incident Management System. The basic premise of Incident Management is that it is the responsibility of emergency responders to clear the scene of incidents quickly in the interest of public safety. This program has already been taught to all Troop C Troopers, local law enforcement, fire and medical personnel, wrecker operators, and many others who may respond to traffic crashes or incidents. The program teaches valuable techniques, which can be used to keep roadways open and to open them as quickly as possible. This program has also been adopted by other Troops and is currently being used across the state. Troop C is currently working on a second phase of training for emergency responders in our area.

The final goal of the TrafficStat program was to develop cooperative partnerships with others, who play an important role in the safety of our highways. We then implemented the fifth E- Everyone Else.

Everyone Else – Traffic safety is not just a law enforcement concern; it is everybody's concern. By being forthright and open about our program and our enforcement tactics, we feel that this not only lends more credibility to our agency, but also fosters cooperation. One of the most important aspects of the TrafficStat program, however, is the relationships that have developed with various local groups and agencies. Troop C maintains a liaison with our local DOTD office, so that problems or potential problems can be reported immediately and preventive

measures taken. Troop C is actively involved in the South Central Safe Community Task Force. This group is comprised of many members of our community, including political leaders, law enforcement and fire personnel, and school and hospital representatives. The task force meets once a month and provides a unique opportunity for networking and exchanging of ideas and resources. Troop C has also fostered an expanded working relationship with other local law enforcement agencies. In the past local agencies only seemed to work together on high profile events, and rarely while conducting normal enforcement activities. Most agencies lacked the resources and manpower to conduct many enforcement activities alone. Activities, such as DWI, insurance checkpoints and details at high traffic locations, can be manpower intensive thus out of reach by many smaller departments. The TrafficStat program has changed that. We now pool our resources and work together, which enables us to conduct enforcement activities that previously could not be conducted alone

Did the project successfully achieve the benefits identified earlier?

Yes _____
No _____

Describe how the project actually met or did not meet the benefits:

The implementation of Troop C's TrafficStat program has not only brought about major changes for the Troopers in enforcement techniques, but it has also been proven to be very effective in a short time. When TrafficStat was in its planning stages, Captain Mitchell knew that by targeting the violations which caused the majority of crashes, we would see the number of crashes decrease. He thought, however, that it would take two to three years to see the results we wanted. The TrafficStat program has far exceeded that time frame and our initial goals. Instead of seeing the results in one to two years, we began to see results within the first three months. Our 2001 year-end TrafficStat report noted that property crashes had dropped almost 6%, our injury crashes almost 12%, and our fatality crashes dropped 18%. Total crashes dropped 8.5%. We firmly believe that this was the result of our TrafficStat program and the Troopers' commitment to the program. That year also saw Following Too Closely citations rise by 309%, Ignoring Traffic Control citations increase by 480%, and DWI arrests increase by almost 19%. These successes were also completed with a 7% drop in enforcement hours. As Captain Mitchell often says, "We are working smarter, not harder."

The Troop C area also showed strong improvement in seat belt compliance in 2001. Many of Troop C's highways follow bayous or other bodies of water. Many motorists feel that they would be safer without a seatbelt if they crash in the bayou. This thought process resulted in Troop C having a 67% seatbelt compliance rate, one of the lowest compliance rates in the state. Although TrafficStat was intended to be a proactive program in regards to crash reduction, we certainly saw some unintended positive results to our seatbelt compliance rates. Our presence at high traffic locations caused a lot of motorists to wear their seatbelts. By the end of the year, we saw our seatbelt citations rise by 27% and child restraint citations increase by 21%. The largest success was witnessed by the private company which conducts the seatbelt compliance surveys. For 2001, Troop C saw a 10% increase in seatbelt compliance (with a 77% seatbelt compliance rate). Troop C led the state in seatbelt compliance and topped the national average of 73%.

Troop C held more DWI checkpoints than any Troop in the State Police. These checkpoints, combined with DWI saturation patrols (often times held together on the same night) resulted in an 18% increase of DWI arrests for the year 2001. These DWI Checkpoints were always held in addition to massive media efforts. Troop C did not investigate one single traffic crash in the entire Troop area on two separate nights when DWI checkpoints were advertised and conducted. The increased pressure placed on DWI violators resulted in a 26% reduction of alcohol and/or drug related fatalities for Troop C in just one year. This 26% reduction for Troop C compared to a 2% increase in alcohol and/or drug related fatalities across the state.

Troop C's TrafficStat program not only achieved its objectives, but also achieved them much quicker than we could ever have expected. We firmly believe that these objectives were met for two reasons: our TrafficStat program, and the dedication and professionalism of each and every Trooper. It is very difficult to alter someone's lifestyle and behavior, but our TrafficStat program seems to have done that. It now seems that most of the public is aware of our TrafficStat program and the effects are being felt elsewhere. The entire troop is now working towards common goals and objectives and Troopers now have a feeling of mission and accomplishment. Troopers are also taking more of an investment in their patrol area, and are working towards a better quality of life for the communities they serve.