

REQUEST FOR PROPOSALS

LTRC Project No. 18-2SA, SIO No. DOTL1000209

Louisiana's Alcohol-Impaired Driving Problem: An Analysis of Crash and Cultural Factors

PROBLEM STATEMENT

Alcohol impairment is among the most common contributors to motor vehicle crashes in the United States and persists as major public health and public safety problems. According to NHTSA *Traffic Safety Facts*, 9,967 people were killed in alcohol-impaired driving crashes on U.S. roadways in 2014, representing an average of one fatality every 53 minutes. In Louisiana in 2014, despite the many enforcement and adjudication strategies and concerted media and outreach efforts, alcohol-impaired driving fatalities (BAC of .08 g/dL or higher) still account of over 33% of all vehicle fatalities.

To improve the safety of our roads, the Impaired Driving Emphasis Area Team of Louisiana's Strategic Highway Safety Plan (SHSP) aims to reduce alcohol-impaired fatalities and injuries by 50% by 2030. Unfortunately, in the last five years, Louisiana has observed an increase in the number of alcohol-impaired driving fatalities; specifically, a 12% increase from 2010 to 2014. In order to reverse this trend, achieve the target, and prevent further alcohol-impaired driving, we need to better understand the individual, community, and cultural risk factors that contribute to drinking and driving behavior in Louisiana.

The public health approach to alcohol misuse encourages professionals to screen and treat the behaviors of individuals who are abusing or addicted to alcohol as well as assess and identify similar risk characteristics in the culture and societal groups within which the individual interacts. By treating both the individual and environmental risk factors, it is expected that there will be more sustainable impact to change abusive behaviors. Similar, in road safety management terms, the systemic approach helps achieve a balance between identifying and addressing safety problems across a roadway network at a systems level as well as addressing individual locations with high numbers of crashes resulting from a deficiency in safety elements at that hot spot. It is expected that the research team will apply the principles of "site", "systemic", and "system-wide" approaches used in highway safety to the human behavioral issue of impaired driving.

This project will provide Louisiana Department of Transportation and Development (LADOTD), Louisiana's SHSP team, other highway safety stakeholders, and law enforcement agencies with a deeper and more complete understanding of the individual, systemic, and system-wide influences that contribute to attitudes, perceptions and beliefs of Louisiana's citizens, particularly as they relate to drinking and alcohol-impaired driving. This information will be extremely helpful in the next phase of this research project during which Louisiana's SHSP team will evaluate its current impaired driving countermeasures and identify new ones based on data results.

OBJECTIVES

The objective of this research is to use multiple risk factor analysis approaches to identify underlying individual, community, and cultural influences that contribute to drinking and driving in Louisiana.

RESEARCH APPROACH

The Louisiana Transportation Research Center (LTRC) is seeking the insight of proposers on how best to achieve the research objective. Proposers shall describe research plans that can be realistically accomplished within the constraints of available funds and contract time as allowed in this RFP.

It is expected that the research team will apply a multi-disciplinary approach to conduct “network screening” and “problem identification” in road safety management terms, but to better understand the complexities of cultural and behavioral influences on driver decisions that result in crashes. This approach is based on a deep analysis of currently available public health and highway safety data sets as well as the collection and analysis of new data through a public health lens. The idea is to identify underlying individual, community, and cultural risk factors that influence individuals to engage in excessive drinking and then drive while impaired in Louisiana. Delving into this goal is expected to take the research team through and far beyond typical risk factor analysis of crashes and into complex socio-ecological considerations of Louisiana’s citizens, including people who engage in impaired driving, people who know those who do, and the general populace.

Proposals must present the candidate’s current thinking in sufficient detail to demonstrate their understanding of the problem and the soundness of their approach. Task descriptions are intended to provide a framework for conducting the research. The research is anticipated to include, at a minimum, the following tasks:

Task 1 – Review of Literature and Data Systems

This task will include a comprehensive examination and review of previous and existing research, literature, and case studies regarding cultural predictors of and implications on alcohol-impaired driving in the USA, and at state levels. At a minimum, searches of the Transportation Research International Documentation (TRID), NHTSA, Governors Highway Safety Association (GHSA), and state databases should be conducted.

Additionally, the research team should conduct a review of the existing national and state data systems that can provide multiple perspectives and comprehensive information about alcohol-impaired driving in Louisiana. These data systems are managed by multiple state agencies such as LA DOTD, LA Department of Health, LA Office of Motor Vehicles, Louisiana Highway Safety Commission, and Louisiana State Police. Data systems to be analyzed may include, but are not limited to, the following listed below.

- Crash
- Injury surveillance and health
- Roadway

- Geographic information systems
- Citation/Prosecution/Adjudication
- Driver history (particularly citation info)
- Demographic
- Behavioral
- Attitude/perception/knowledge
- Safety program evaluation
- Epidemiological

Task 2 – Identify the Risk Factors Using a Systemic Approach

This task will be focused on identifying the risk factors associated with alcohol-impaired driving by looking specifically at Louisiana’s statewide and local databases.

This will include conducting a spatial analysis of crash data using driver home zip codes to calculate a rate of alcohol crashes as a percentage of all crashes. The research team will analyze both recorded alcohol and predicted alcohol to see if there are major differences. Then, the research team will look for statistically significant clustering and regional variation in crash rates. Using Census and American Community Survey data from the zip code, the team can investigate the correlation of social and demographic data with high- and low-alcohol crash rates to identify localized crash risk factors.

Note: DOTD/LTRC contracts to collect, maintain, store, analyze, and distribute crash related data captured from law enforcement and other agencies throughout the state of Louisiana. LTRC will facilitate any coordination with that contractor, as needed.

Additionally, the research team will conduct analysis of existing data sets to identify possible attitudinal, perception, and cultural nexus between excessive drinking behaviors and alcohol-impaired crashes.

Task 3 – Create and Administer a Survey Based on the Identified Risk Factors

This task will be focused on creating, testing, and administering a household survey across Louisiana using the risk factors identified in the previous Task to determine driver attitudes about risk taking and impaired driving. This survey data, when combined with the above data, will serve as the basis for a profile of the social, cultural and behavioral factors affecting a driver’s choice to drink and drive in Louisiana.

Task 4 - Interim Report

This will include a report summarizing the findings of Tasks 1–3.

Task 5 – Qualitative Research Project to Investigate Identified Risk Factors of Sub-Groups

In the task, the research team will create and administer a qualitative research project among targeted sub-populations in predetermined regions aligning with Louisiana approach to its SHSP implementation to further investigate the identified individual, community, and cultural risk factors that influence behaviors, attitudes, and beliefs associated with impaired driving. Sub-populations can consist of, but are not limited to, first-time DWI offenders, repeat DWI offenders, offenders’ families/friends, substance abuse treatment providers, law enforcement, and other first-

line responders. Further, the research team is expected to identify specific sub-groups based on demographics such as age, gender, and socioeconomic status to determine if these factors lead to increased levels of alcohol-impaired driving.

Task 6 – Final Report and Technical Summary

The research team will prepare a final report to document the entire research effort. The final report should include all the data, results, and recommendations generated by this study. A Final Draft Report, Technical Summary document (two pages), and summary presentation to the Project Review Committee (PRC) are due three (3) months prior to the project completion date for review and approval. The final report shall direct and recommend future steps toward the incorporation/implementation of the research results and include recommendations on other areas that could be further expanded in subsequent research projects.

DELIVERABLES

The proposal shall include project deliverables for appropriate tasks. Deliverables shall be due as defined in the proposal. The proposal shall include at a minimum the following deliverables:

- Interim Report
- Draft Survey
- Presentations to the PRC
- Final Report, Technical Summary, and Implementation Plan

SPECIAL NOTES

A. LTRC research projects will be conducted in accordance with the LTRC Manual of Research Procedures, 2016 edition.

http://www.ltrc.lsu.edu/pdf/2016/LTRC_RESEARCH_MANUAL_FINAL.pdf

B. Task descriptions are intended to provide a framework for conducting the research. Louisiana Transportation Research Center (LTRC) is seeking the insight of proposers on how best to achieve the research objectives. Proposers are expected to describe research plans that can be realistically accomplished within the constraints of available funds and contract time as highlighted on page 4. Proposals must present the candidate's current thinking in sufficient detail to demonstrate their understanding of the problem and the soundness of their approach.

Any work that is anticipated to be required from LTRC or DOTD forces shall be specifically detailed in the proposal.

C. Any surveys or questionnaires developed by the research team shall be reviewed and approved by the PRC prior to distribution.

D. LTRC projects are intended to produce results that will be applied in practice. It is expected that the implementation of the results of this research into practice will evolve as a concerted effort during this project. The final report must contain an implementation plan to include, as a minimum, the following:

- a. The “product” expected from the research;
- b. A realistic assessment of impediments to successful implementation;
- c. The activities necessary for successful implementation; and
- d. The criteria for judging the progress and consequences of implementation.

- E. To assist in the implementation process, the investigators of this research shall present the results to LA DOTD/LHSC officials in an oral presentation to be held in Baton Rouge, Louisiana at LA DOTD Headquarters after acceptance of the final report.
- F. The proposal should include travel to meet with the Project Review Committee for a “kick off” meeting, presentation of interim report, and presentation of the final report at a minimum. Funds budgeted for travel shall be limited to what is necessary for the conduct of the research. Funds shall not be budgeted for conference travel. Funding for technology transfer of research results are available upon request subject to LTRC approval and available funds.
- G. LTRC’s mission includes the support of higher education in Louisiana. Consultant and out-of-state institutions submitting proposals are encouraged to cooperate and collaborate with Louisiana universities for the purpose of sharing of knowledge and increasing transportation expertise in the academic community.
- H. Graduate assistance stipends are allowed. Tuition reimbursement or tuition remission rates applied to stipends are not allowed.
- I. To equitably answer any questions regarding this Request for Proposals, the Louisiana Department of Transportation and Development (LA DOTD) website will be updated with questions and answers and related documents regarding the project.
<http://webmail.dotd.louisiana.gov/AgreStat.nsf/BWebAdvertisements?OpenPage>
LA DOTD makes these documents available for informational purposes only to aid in the efficient dissemination of information to interested parties. LA DOTD does not warrant the documents against deficiencies of any kind. The data contained within this web site will be periodically updated. Interested parties are responsible to be aware of any updates. Questions regarding this RFP should be submitted in writing to the LTRC contact person. Questions must be received by close of business seven calendar days prior to deadline date.
- J. Consultants and business entities shall be registered with the Secretary of State in order to be able to work in Louisiana prior to award of contract.
<http://www.sos.la.gov/Pages/default.aspx>
- K. If Sub-Consultants/Entities are used; the Prime Consultant/Entity must perform a minimum of 51% of the work for the overall project.
- L. LTRC reserves the right to withhold invoice payments for delinquent deliverables as defined in the proposal.

ESTIMATED COST OF RESEARCH

\$175,000

ESTIMATED COMPLETION TIME

24 Months (*includes 3 months for review and approval of final report*)

LTRC PRIMARY CONTACT

Kirk Zeringue, P.E.
Special Studies Research Administrator
225-767-9169

Kirk.zeringue@la.gov

AUTHORIZATION TO BEGIN WORK:

January 2, 2018 (estimated)

PROPOSAL FORMAT

All proposals are required to be formatted according to LTRC Manual of Research Procedures. Section 3.3 provides guidance on proposal development. A copy of the Manual may be downloaded from our website

(http://www.ltrc.lsu.edu/pdf/2016/LTRC_RESEARCH_MANUAL_FINAL.pdf).

PROPOSAL SELECTION

The Project Review Committee selected for this project will review, evaluate and rank all proposals received using the criteria established on the attached proposal review form.

DEADLINE FOR RECEIPT OF PROPOSALS

Ten copies of the proposal must be received by LTRC by the close of business day of November 30, 2017.

Proposals should be submitted to:

Samuel Cooper, Ph.D., P.E.

Director Louisiana Transportation Research Center

4101 Gourrier Ave.

Baton Rouge, LA 70808