



# TECHSUMMARY *December 2015*

State Project No. 30001506 / LTRC Project No. 14-4SS

## Identifying Local Transit Resources for Evacuation

### INTRODUCTION

In addition to regular urban area transit systems, there are hundreds of small "on demand" public transit systems that provide transportation to various categories of riders: the elderly, low-income, veterans, disabled, and those needing access to jobs. These are funded through at least eight different state agencies with over 60 different federally funded programs with little centralized coordination. There is no single means of identifying all these local resources (drivers and vehicles). The result is a disconnected system of services that cannot be leveraged for emergency evacuation or to realize numerous benefits of routine transportation service year round.

If these transit resources could be coordinated and conveniently accessed, they could provide a valuable resource in moving people away from danger in an emergency. The first step in achieving such coordination and cooperation is establishing an inventory of existing resources. Beside assisting in evacuation during emergencies, establishing coordination and cooperation among the individual organizations could support transportation efficiencies and mobility year round, and could result in significant cost savings to state and local authorities.

### OBJECTIVE

The objectives of this study were to establish an inventory of transit vehicles used by human services and special needs organizations in the coastal region of Louisiana and to identify the demand there would be for such transit vehicles if an emergency arose.

### SCOPE

The inventory was limited to the 20 coastal parishes in Louisiana. It also only involved human service and special needs organizations that provide transit service to their customers. Regular urban transit systems such as commuter rail, streetcars, and buses were excluded from the study. School buses were also excluded from the inventory.

### METHODOLOGY

The inventory of transit resources was established using a mail-out, mail-back survey to organizations registered with the Louisiana Department of Health and Human Services, Department of Child and Family Services, Department of Transportation and Development, Veterans Administration, and retirement organizations. In the questionnaire, organizations were asked to provide information on vehicles, drivers, physical location, number of riders in both normal and emergency situations, any restrictions on the operation of the transit system, degree of cooperation with other organizations, and information on a contact person. Vehicle information included the capacity and features of each vehicle, such as whether it had a wheelchair lift or not, and information on the drivers included their certification to provide certain medical services such as securing a wheelchair in a vehicle, CPR, etc. The inventory data was incorporated into an Online ArcGIS system from which transit resources by point and area could be determined. To estimate expected demand, data from the national census and the National Land Cover Database were used to

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estimate the number and location of special needs and regular transit patrons for both regular and emergency conditions. Beside the resident population, an estimate was made of tourists taking into account the variation in numbers by season and special event. Daily migration patterns of the population were taken into account to estimate their location by time of day. The population was divided into workers, students, tourists, stay-at-homers, and shoppers, and the daily migration patterns of these groups were determined for a typical weekday and weekend. It was assumed that during an emergency, an organization would serve their regular customers first, but may also be called upon to serve the general population if the emergency was acute, they could provide assistance quickly, and other transportation was not available.

## CONCLUSIONS

It was found that only 58 of an estimated 473 eligible special needs and human services organizations participated in the survey (12%) even though the survey was endorsed by the Secretaries of the Department of Transportation and Development and the Department of Health and Human Services, included a substantial prize, had three reminders, and was a survey that could be completed in 10 minutes. The conclusion is drawn that cooperation will only be achieved by forcing organizations to cooperate (either through legislation or as a condition of them receiving public funding), or by making it so attractive that they want to cooperate. Some improvement in the attractiveness of cooperation could be achieved by removing the liability, cost, and inconvenience of participation, and introducing a user-friendly reimbursement system for vehicle, labor, and facility expenses.

Only about one-quarter of the organizations contacted in this survey provide transit service to their clients. The most common form of transportation was a van (45%), bus (21%), and minivan (7%). The remaining types of vehicles used were car, truck, and ambulance. A total of 384 vehicles with a total passenger capacity of 3,638 were reported from 58 organizations. Two deductions are drawn from this situation. First, if 12% of the organizations field 384 vehicles, all organizations could field approximately 3,200 vehicles with a total capacity of approximately 30,000 passengers. While this transit capacity is spread among the 20 coastal parishes, it does illustrate the extent of the resource that could be tapped if cooperation among organizations could be achieved. Second, the fact that three-quarters of

the organizations provide no transportation service to their clients at all suggests that many organizations will be unable to evacuate their clients if they face an immediate threat. This is most likely to be the case for veterans' homes, retirement facilities, rehabilitation centers, special needs schools, hospices, nursing homes, and hospitals.

Of the drivers in the survey, 91% can administer CPR, 83% can administer first aid, 68% can secure a wheelchair in a vehicle, 66% can operate a wheelchair lift, 11% can administer oxygen, and 10% can administer an IV. This represents a high level of training needed in the transport of special needs people. Of drivers in the survey, 40% reported that they were prepared to drive their vehicles in the case of an advance notice emergency, and 19% in a no-notice emergency. This suggests that while it may be difficult to establish cooperation among organizations, the potential benefit of doing so is substantial and, under the right circumstances, achievable.

## RECOMMENDATIONS

Based on the findings of this study, the following recommendations were made:

- Conduct a study to investigate the feasibility of providing state-sponsored insurance to organizations providing emergency evacuation transit service at the request of the state.
- Develop an online accounting system that allows transit providers an easy and quick method of claiming reimbursement for expenses incurred in providing transit service requested by the state.
- Establish reimbursement rates that make it attractive for organization to provide emergency evacuation transit service.
- Investigate whether cooperation among organizations can be mandated as a condition of receiving funding from state and federal agencies.
- Conduct a survey similar to the one conducted in this study to establish an inventory of transit resources when sufficient measures have been implemented to ensure that at least the majority of organizations will cooperate with each other in emergencies
- Incorporate the data gathered in the second inventory into ArcGIS Online.
- Train users of the system in its use.