THE ROLE OF SCHOOL BUSES IN RURAL EVACUATIONS

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Overview

• Background
  – Why study rural areas and school buses?
  – What is the role of public transit in evacuations?
• Study of school bus emergency preparedness in Northern Gulf of Mexico
• Advantages/Disadvantages of school bus use in evacuations
Why Study Rural Areas?

• 40% of the country’s transit dependent population live in rural areas
• Rural areas are underserved by public transportation
• Emergency transit use information is readily available for urban areas but lacking in rural locations

Why Include School Buses?

• Widely available in rural areas
• Often the only means of rural public transportation
• Easily accessible and recognizable
Examples of School Bus Use in Emergency Evacuations

- Air Ontario jet crash, Northern Ontario, 1989: school buses were only means of public transportation for hospital transport
- Gander, Newfoundland, 9/11/2001: school buses used to evacuate 6,600 passengers to & from airport
- Senior center evacuation, Martinsburg, WV, 2009: over 100 patients and staff evacuated from nursing home by school bus due to fire on premises
Role of Transit in Evacuation

School buses can perform multiple roles in four tasks of emergency management planning:

(1) Mitigation
(2) Preparedness
(3) Response
(4) Recovery

www.eastpdxnews.com

www.ambibus.com
Objective

Assess the emergency preparedness of school buses in rural coastal communities in the Gulf Coast region

• The assessment focuses on:
  – how adequately school systems are prepared
  – what role they can play in the event of an emergency/evacuation
Survey Methodology

- Surveys were distributed to 46 public, private and school transportation agencies within the study area
- Ten public school systems responded
- Major topics:
  - Transit Services Provided in Rural Areas
  - Communication Systems Used for Transit
  - Emergency Event Issues
  - Employee Issues
  - Evacuation Preparation
  - Transit Expenditure and Evacuation Assessment of Needs/Coordination
Study Area

24 counties and 4 parishes along the I-10 corridor from Florida to Louisiana
Employee Training

- People w/ service animals or pets: 2
- People w/ hearing or visual impairments: 4
- People w/ limited English proficiency: 2
- Careless residents: 2
- People w/ disabilities & other medical conditions: 8
- The elderly: 3
Employee Training

- Emergency communication: 5
- Incident Command System/Management: 3
- Reverse lane driving: 1
- Driving in hurricane traffic zone: 4
- Emergency management: 4
- Primary medical services (First Aid): 4
- Assistance to special needs population: 7
Established Communication Protocols w/ Agencies

- Local Traffic Management Agency: 4
- Medical Center/Health Facilities: 3
- Federal Emergency Management Agency: 4
- County/State Emergency Management Center: 9
- Department of Transportation: 4
- Law Enforcement Agency: 5
Mock Drills

- Number of school systems that had conducted mock drills: 6
- Most drills took place before or at the start of hurricane season, and all were within the last 2 years
Maximum Travel Distance

- 25-49 miles: 0
- 50-74 miles: 1
- 75-99 miles: 1
- 100-149 miles: 2
- 150-225 miles: 3
- Other: 2
## Vehicle Fleet

<table>
<thead>
<tr>
<th>Vehicle Type</th>
<th>Total Passenger Capacity (No. of Seats)</th>
<th>Total Number of Vehicles</th>
<th>Total Number of Wheelchair Accessible Spots</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Cars</td>
<td>599</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>• Sport Utility Vehicles (SUVs)</td>
<td>47</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>• Minivans</td>
<td>470</td>
<td>34</td>
<td>16</td>
</tr>
<tr>
<td>• Standard 15-passenger vans</td>
<td>750</td>
<td>51</td>
<td>21</td>
</tr>
<tr>
<td>• Converted 15-passenger vans (e.g., raised roof, wheelchair lift)</td>
<td>395</td>
<td>59</td>
<td>90</td>
</tr>
<tr>
<td>• Light-duty bus (body-on-chassis type capacity between 16-24 passengers)</td>
<td>1117</td>
<td>61</td>
<td>52</td>
</tr>
<tr>
<td>• Medium duty bus (body-on-chassis type capacity over 22 passengers)</td>
<td>1191</td>
<td>28</td>
<td>35</td>
</tr>
<tr>
<td>• <strong>School bus (yellow school bus capacity between 20 and 76 students)</strong></td>
<td><strong>61640</strong></td>
<td><strong>791</strong></td>
<td><strong>120</strong></td>
</tr>
<tr>
<td>• Medium or heavy duty transit bus</td>
<td>840</td>
<td>30</td>
<td>33</td>
</tr>
</tbody>
</table>
Conclusions

• School bus systems actively participate in evacuation operations

• Bus drivers, operational equipment, and buses are ready to perform multiple tasks in emergency events

• Schools must conduct regular emergency management planning exercises, education and training programs, and mock drills

• It is essential to foster and support pre-established mutual aid agreements with transit authorities, transportation departments, emergency and law-enforcement agencies, emergency responders, health care facilities, and media
School Bus Systems

ADVANTAGES:

• Buses are equipped to deal with issues such as altered bus schedules, traffic congestion, and weather conditions

• Schools act as shelters

• School buses are highly visible—beneficial for law enforcement agencies to give them priority in traffic

• Resources such as drivers, school nurses, safety officers, coordinators, and mechanics would be available to supplement emergency services

www.blog.briangriffiths.com
School Bus Systems

DISADVANTAGES:

• Limited wheelchair accessible seats

• Have to rely on local EMAs for passenger information, maps, and directions

• Greater risk of exposure to litigation

• Delayed response time/integration into emergency response

• Not equipped with air-conditioning

• Reduced passenger capacity in evacuations
Questions?

www.westerntransportationinstitute.org

Rural matters
Roads that work for people should work for the environment, too.
References:


