



**NTSB** National Transportation Safety Board

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Office of Research and Engineering

# Rural Travel Risk Factors for Large Buses

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# Fatal Accident Data Analysis

- Focus on large buses: 2000-2007
  - Motorcoaches
  - Transit and city buses
  - Specialty/medium-sized buses (GVWR 10K-26K pounds)
- Passenger-carrying operations
  - Tours and charters
  - Scheduled service
  - Commuter service
  - Shuttle service

# Fatal Accident Data Analysis

- Results: 2000-2007
  - 1,093 fatal accidents
  - 1,315 fatalities
  - 3,471 nonfatal injuries
- Travel risk found to be higher than previously reported

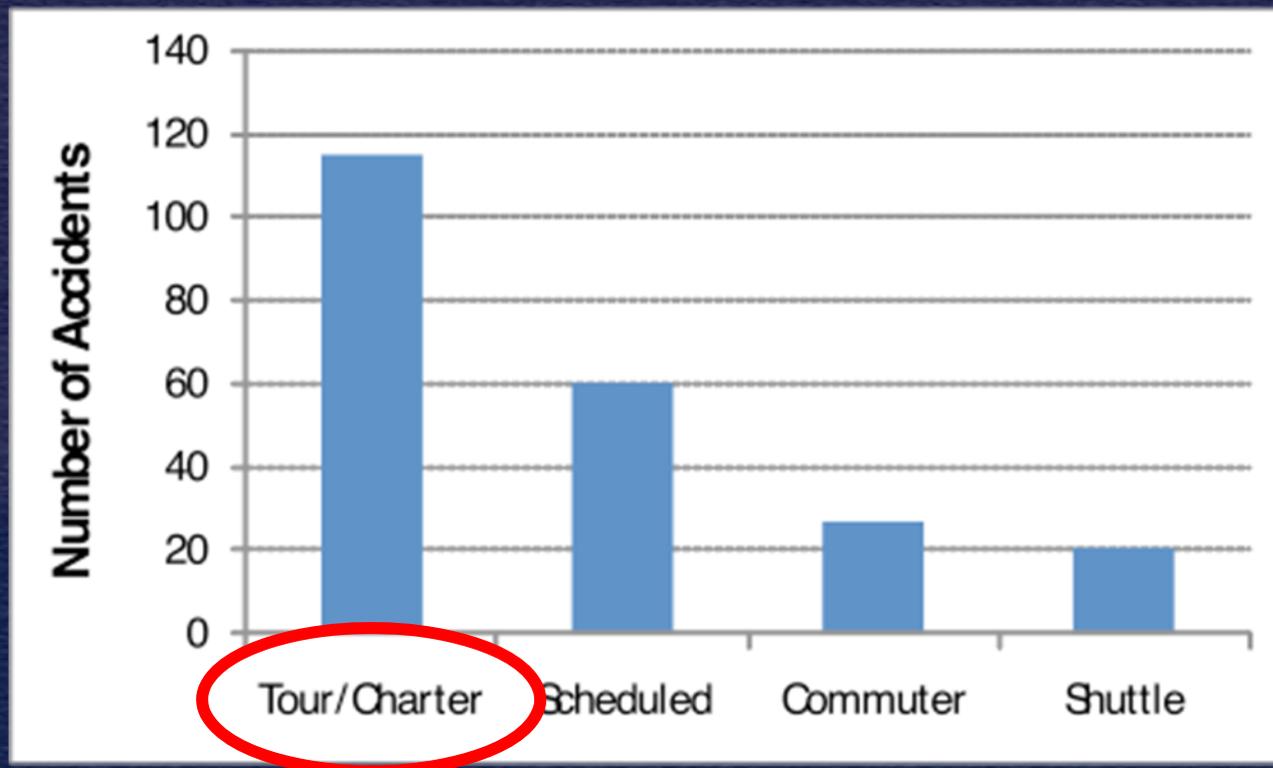
# Travel Risk Higher Than Expected

## Bus Occupant Fatality and Injury Accidents 2000 - 2007

	Rural	Urban
Fatal Injury Accidents	19%	5%
Nonfatal Injury Accidents	61%	35%

# Tour & Charter Rural Travel Risk

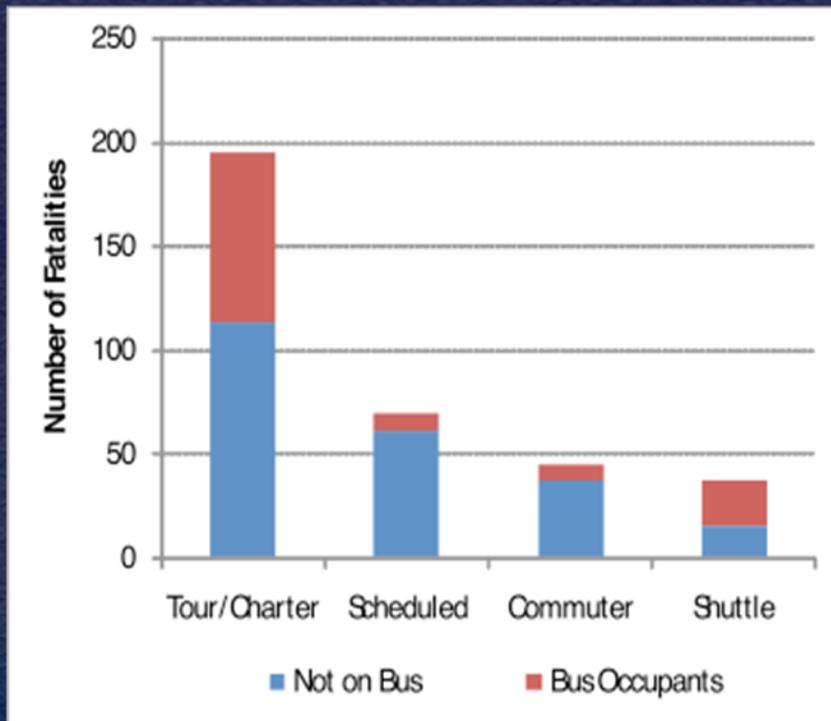
Rural Fatal Accidents Involving Large Buses  
2000 - 2007



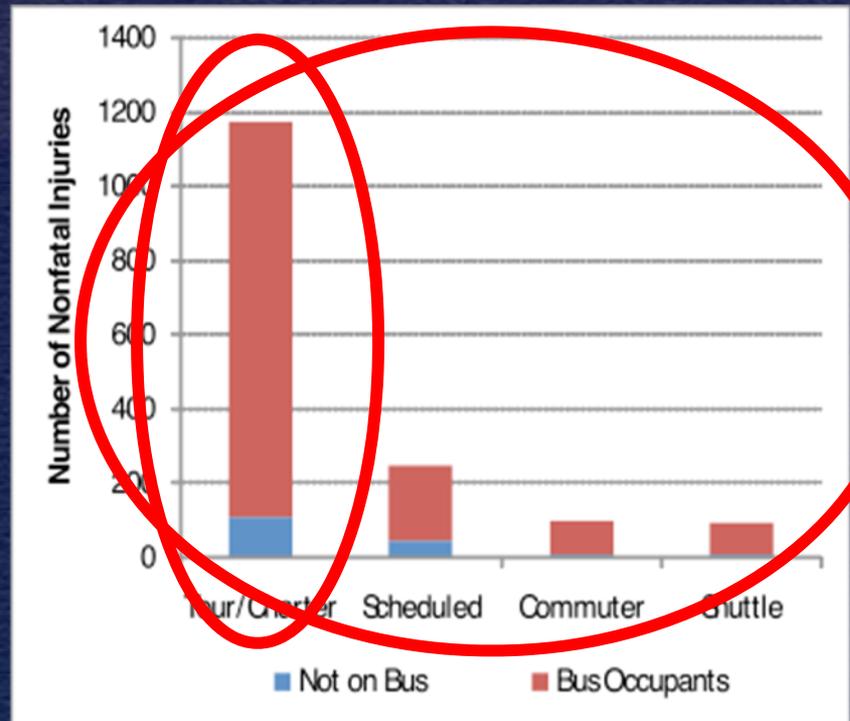
# All Bus Occupants Are At Risk

## Rural Fatal Accidents Involving Large Buses 2000 - 2007

### Fatalities



### Nonfatal Injuries



# Large Bus Rural Travel Risk

- Rural fatal accidents involving large buses dominated by tours and charters
- Almost all are motorcoaches
- Accidents can produce a large number of nonfatally injured bus occupants
- Accidents place considerable demands on rural EMS resources
- Comprehensive analysis required to characterize rural travel risk for large buses

# Federal Efforts to Address Risk

- FHWA High Risk Rural Roads Programs
  - Focus on fatalities misrepresents risk of injury
  - Measures of exposure too coarse
- FHWA Highway Safety Improvement Program
  - Establishes criteria for all highway safety improvements
  - Focuses on fatalities and coarse activity measures
  - Emphasizes construction projects

# Summary

- Inadequate large bus travel data limits States' ability to assess high risk rural roads and locations
- Highway Safety Improvement Program does not adequately account for travel risk by large buses
- FHWA criteria must take into consideration bus travel in rural areas



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