Responding Regionally:
The Role of Passenger Rail in Midwestern Emergency Planning
About the Midwest Interstate Passenger Rail Commission

The Midwest Interstate Passenger Rail Commission (MIPRC) is a coalition of Midwestern states working together to improve and increase rail service in our region. Created through compact legislation among Midwestern states in 2000, the MIPRC brings together state elected officials and their designees to provide advocacy and information exchange in the effort to create safe, affordable and efficient passenger railways across the nation’s Heartland.

The main purposes of the compact are to promote, coordinate and support regional improvements to passenger rail service by:

• Promoting development and implementation of improvements and long-range plans for intercity passenger rail service in the Midwest;

• Coordinating interaction among Midwestern state officials, and among the public and private sector at all levels (federal, state and local); and

• Supporting current state efforts being conducted through state transportation departments.

The states of Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota and Wisconsin are eligible to join. Other states may also be declared eligible to join, upon approval of the commission that was created when the compact became effective.

The MIPRC has been effective in educating Members of Congress from its member states on the importance of passenger rail development to the region, and in facilitating dialogue among various parties with an interest in rail. The MIPRC led an effort that formulated and promoted the American Passenger Rail Agreement – a common set of principles for passenger rail development that over 100 groups of state officials, advocacy organizations, unions and corporations are advocating at the federal level.

The group seeks a dedicated source of funding for passenger rail and a preserved and improved nationwide passenger rail system. In addition, the MIPRC continues to advocate for federal funding to implement the Midwest Regional Rail Initiative (MWRRI), a nine-state effort to improve the efficiency and frequency of passenger rail service in the region, and for the Ohio Hub plan, which would also dramatically increase the region’s passenger rail service, as well as connect the Midwest to the East.
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The Role of Passenger Rail in Midwestern Emergency Planning

Prepared by the Midwest Interstate Passenger Rail Commission
November 2006
November, 2006

Dear Friends,

Recent events in U.S. history – both natural and man-made – have shown us that our country is vulnerable to the kind of disasters that can leave regions reeling. Emergency management and preparedness have become more and more a part of the daily lives of citizens and governments alike. We have seen the havoc that terror attacks and weather events can wreak on our country, and we have vowed as a nation to better prepare ourselves.

Although we hope that we will never again witness the suffering caused by Sept. 11 and hurricanes Katrina and Rita, we can learn valuable lessons from the effectiveness of the evacuation efforts these events necessitated.

During the aftermath of all three disasters, when other transportation options were halted or incapacitated, emergency planners recognized the key role that passenger rail can play.

Passenger rail can be a vital part of an efficient transportation system and a thriving region. Among its many assets, including safe travel and responsible energy consumption, is that passenger rail can bring people to safety – as well as emergency responders into affected areas – when disaster strikes.

The development of a modern passenger rail service is an integral component of the intermodal transportation infrastructure needed to move people and goods quickly, safely and economically in the 21st century. But this essential transportation component has not received the attention currently afforded to other transportation modes.

With all major metropolitan cities within the 100-500 mile range of the Chicago Hub, our region is the ideal candidate for more frequent intercity passenger rail service at higher speeds. The Midwest is ready with the plans: the Midwest Regional Rail Initiative – a 3,000-mile plan that would upgrade tracks and double the number of trainsets dedicated to our region – and the Ohio Hub, which would not only connect us to the Northeast, but bring more trainsets and track. These upgraded tracks and infusion of trainsets into the region would also mean that passenger rail could be factored in as a vital component of state and regional transportation emergency plans.

We cannot afford to ignore the possibilities that passenger rail affords our region: efficient travel, congestion mitigation and the ability to move vulnerable people out of harm’s way. But in order to take full advantage of the many benefits of passenger rail, both federal and state governments must recognize it as a vital component of our region’s transportation system, and commit to the necessary investments.

The time is now. The Midwest is on the brink of becoming an even more vibrant place to live and work. Through support of visionary proposals to strengthen our passenger rail system, we can put the Midwest on the right track.

Sincerely,

Robert N. Jackman, DVM
Indiana State Senator
Chair

Charlie Schlottach
Missouri State Representative
Vice Chair

Sharon Marko
Minnesota State Senator
Financial Officer

Chair
Sen. Robert N. Jackman, Indiana

Vice-Chair
Rep. Charlie Schlottach, Missouri

Financial Officer
Sen. Sharon Marko, Minnesota

Director
Laura Kliewer
While some say passenger rail is a luxury in the United States, others believe it is a necessary part of a strong transportation system – and many deem it just a convenient way to get to work. But what if a passenger rail system were a way out of an area during an emergency?

On August 10, 2006, British and American law enforcement officials revealed that they had foiled a terror plot to hijack and blow up planes over the Atlantic. Flights in both countries were severely delayed, and strict security regulations were immediately put in place. While air traffic was in crisis in the U.S., many of those who were stranded turned to the nation’s passenger rail system.

Amtrak said bookings rose by 26% immediately following the announcement of the thwarted terror plot. Calls to the passenger railroad’s customer service centers also rose by 14 percent over the year before, the company reported. “I think it’s fair to say whenever there is a major disruption or security issue with one mode, the public searches for alternatives,” said Marc Magliari, media relations manager with Amtrak’s Chicago office.

The figures reported by Amtrak demonstrate the need for an intermodal transportation system that offers a range of options for a changing world. In addition to being a solution to problems like highway congestion, pollution and skyrocketing fuel costs, passenger rail can also serve as a vital resource in times of great need. Many emergency planners are beginning to consider how rail can be used as a tool in the event of a disaster, whether man-made or natural.

Passenger rail has the capability to move large numbers of people out of harm’s way – and bring in much-needed supplies – quickly. And when other modes of transportation are halted, passenger trains and the railroad tracks that carry them can be a vital lifeline for those who need to be brought out of danger safely, efficiently and quickly, as evidenced during events such as Sept. 11.

“Transit systems often provide the only opportunity to avoid or flee potentially catastrophic events, and regularly serve as and/or give critical support to first responders by delivering emergency equipment and supplies, ferrying emergency response personnel and controlling access to and from disaster sites,” stated a report published by the American Public Transportation Association and the Public Transportation Partnership for Tomorrow.

But often, rail doesn’t factor into state and regional emergency plans. “No one has ever asked us how we would evacuate people,” said George Weber, chief of the Illinois Department of Transportation’s passenger rail department. “It would be a spur-of-the-moment thing.”

Largely because the Midwest’s passenger rail network has not yet been brought up to speed with other critical forms of transportation, rail is an underutilized resource in planning for emergencies. The Midwest’s transportation system doesn’t yet have the capacity to make rail a major source of evacuation. But if investments were made for improvements such as those envisioned by the Midwest Regional Rail and the Ohio Hub systems, passenger rail could also make a large impact on the way emergency planners move people and supplies when it matters most.

The Midwest Regional Rail Initiative is a bold plan to connect 150 Midwestern communities through a network of rail corridors. When connected with the Ohio Hub system, which would extend service throughout Ohio and connect the region to the East Coast, the two proposals would dramatically improve the region’s passenger rail capabilities.

The demands placed on today’s transportation system are different than those ever before faced in the United States. With a growing population and an increased need for security, the U.S. transportation system has been forced to evolve quickly. While air transportation, mass transit and highways have been given government subsidies to adapt to the changing face of transportation, passenger rail has essentially been left behind.

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The Midwest can learn from several recent disasters that have affected both other regions and the nation as a whole. If key investments were made to passenger rail in the Midwest, the region’s transportation system overall would be strengthened, and the region’s emergency planners could factor in passenger rail as a vital responder.

**Getting Prepared**

In today’s world, we all want to be safer; yet, disasters are often unpredictable. While we can’t predict emergencies, we can prepare for them. Efficient, organized transportation plans can be effective in getting people out of harm’s way both before and after a disaster, as evidenced by responses to recent events such as Sept. 11 and hurricanes Katrina and Rita.

“Emergency preparedness with rail was in its infancy 10 years ago,” said Larry Beard, a senior director of emergency preparedness at Amtrak’s Washington, D.C., office. “We’ve gotten more and more into general emergencies, such as Katrina and 9/11.”

Preparing for a disaster during which large numbers of people may need to be evacuated, and supplies must be brought into the affected area quickly, requires careful assessment of resources. Most of all, emergency planners agree that a successful evacuation or relief effort necessitates a plan crafted in advance that can address a wide array of issues in a time of need. Response to three major disasters in recent history, detailed in the following case studies, demonstrate the critical role rail can play in emergency preparedness.

**Case Study #1**

**Rail Evacuation on Sept. 11: A ‘Success Story’**

On Sept. 11, 2001, the United States experienced a brutal attack like no other in its history. So many aspects of our lives changed drastically in an instant, and the American transportation system was no exception. The experience of passengers grounded in our nation’s airports on Sept. 11 and the days following suggests that having a varied matrix of transportation modes can ensure efficient disaster response, and provide a sense of order in a tumultuous situation.

Because air traffic was halted immediately following the attacks, millions of Americans were left stranded all over the country. The evacuation of Manhattan, the site of the World Trade Center towers that collapsed that day, was particularly challenging because the bustling metropolitan epicenter is surrounded by water. Bridges were closed and traffic came to a grinding halt, forcing many in the immediate area to flee on foot.

According to a report by the U.S. Department of Transportation, as many as 460,000 people were evacuated from Lower Manhattan via water transportation, such as ferries and Coast Guard vessels. Amtrak was also an integral part of the evacuation effort. “The only good thing about 9/11 was the fact that the two cities that were hit – New York and Washington – have some of the finest rail in the country,” said Ross Capon, executive director of the National Association of Railroad Passengers (NARP).

Amtrak ceased rail service soon after news broke of the attacks on the World Trade Center, Beard said. But three hours after the towers collapsed, New York Mayor Rudi Giuliani called then-Amtrak President George Warrington and asked for help in getting volunteers from Boston and Washington, D.C., to ground zero.

The rail company was quick to help. After infrastructure had been secured, Amtrak agreed to run two trains, each with 10 to 15 cars, on the Northeast Corridor. The first train brought close to 1,000 firefighters, police officers and emergency workers from Boston and Washington, D.C., to ground zero to help victims of the attack at the World Trade Center. Volunteers rode free of charge that day, Beard said.

One of the passengers on the Amtrak trips into the city was U.S. Rep. Jerrold Nadler, D-New York. His district includes the site of the World Trade Center, and while most were trying to get out of the area, Nadler was trying to get home.

“The planes weren’t flying,” Nadler said. “The bridges and tunnels into Manhattan were all blocked. You couldn’t get in by bus. You couldn’t get in by car. You couldn’t get in on foot. The only way to get to Manhattan...
on September 11th was by passenger rail.

Soon, the rail company began running regular passenger trains, monitored by security guards, on a modified schedule – mostly bringing commuters out of the city and to their homes along the Northeast Corridor. Thanks to a “tremendous amount of coordination and cooperation between agencies,” there was not a single rapid transit-related death on September 11, states the U.S. DOT report. “That was a big success story,” Beard said. “We had a lot of 18-hour days, but we ran very safe railroads.”

Amtrak provided a vital transportation role during a time when millions of people, including stranded airline passengers, were panicked and eager to get home to their families. “[Rail] is a critical transportation leg of the stool, and one of the other legs of the stool was out of service,” Magliari said.

In a report written one year after the attacks, Vincent Pearce, a national response program manager with the U.S. DOT, sought to explore the lessons that could be taken away from the test the transportation system faced that day. “Surface transportation has changed and continues to change in response to the attack. Agencies that own and operate surface transportation systems must understand the relevant lessons from the 9/11 experience and respond accordingly so that we as a nation are well prepared should we be attacked again,” he wrote.

Pearce named adaptable, pre-existing disaster plans, along with the capacity for coordination among many transportation and emergency personnel, as key recommendations for local, state and federal agencies’ preparedness efforts.

The rail transportation effort was aided on Sept. 11 by a number of factors. First, Amtrak owns almost all of the tracks between Washington, D.C., and Boston, which allowed personnel to take total control of the situation. In addition, many people who rode the rails that day were returning home, and didn’t require shelters on the other end of their trips, Beard said.

Also, the Northeast has more passenger rail frequencies than any other region. Passengers can take the train any time of the day between Washington and Boston, and emergency planners can count on a number of trainsets on the corridor at any given time that could respond quickly to emergencies anywhere in the Northeast.

Sept. 11 brought to light the vulnerability of the United States, including its transportation system, and how an improved Midwestern passenger rail network could help in times of need. “Now we have to think about the Midwest Regional Rail System and the Ohio Hub, not only from a mobility standpoint or a congestion standpoint, but from a homeland security standpoint,” said Stu Nicholson, public information officer with the Ohio Rail Development Commission (ORDC).

Case Study #2
Lessons Learned from Hurricane Katrina

Unfortunately, transportation out of affected areas did not go as smoothly in preparation for and response to Hurricane Katrina, when local and state officials were faced with a number of challenges. They also hadn’t prepared for using passenger rail as an evacuation route. “It wasn’t as effective as we would have liked it to be,” Pearce said.

As it does in anticipation of all major hurricanes, Amtrak began to move vital infrastructure and employees to its facility in McComb, Miss., as Hurricane Katrina approached the Gulf Coast in August 2005. The rail company contacted the city of New Orleans and offered to take evacuees out of the area on a departing train. But due to organizational challenges and lack of planning, the train left empty. According to a Federal Highway Administration (FHWA) report to Congress, the 20-car train could have carried at least 900 people.

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“[City officials] had no mechanism to get people to the trains,” Magliari explained. “There was no plan in place to either get people to the train or to deal with people once they got to McComb."

Several days after Katrina’s devastation, Amtrak again offered to help bring people out of the area. Amtrak maneuvered a 12-car train to New Orleans’ Avondale Rail Yard, bringing supplies of food and water, the FHWA reported to Congress.

“We have clear tracks and an empty train ready to help get residents safely out of the city,” said Secretary of Transportation Norman Mineta on September 2, the day the Amtrak train arrived in New Orleans. “Amtrak gives us yet another way to help move people so we can get the job done as quickly, comfortably and reliably as possible.”

But despite the train having a capacity for 600 people, just 97 made it out on that train to Lafayette, La. Local officials, plagued again by planning issues, couldn’t coordinate the transport of residents to the train station. Amtrak was prepared to conduct more evacuation efforts, but plans were halted as cities in Texas struggled to manage a massive influx of people, Magliari said.

In its report, the FHWA addressed the logistical problems: “Difficulty was encountered in staging evacuees to use passenger rail services that were offered by Amtrak because of communication and coordination problems among local, state and federal officials.”

Some of the failures highlight the need for a defined plan for using rail in evacuations, Beard said. That process includes working with Amtrak and coordinating “end points”: cities that would receive evacuees if the need arises. Most of all, if local officials want to use rail in their evacuation plans, “they have to come talk to us,” he said.

In hopes of helping the city become better prepared for a future disaster, and plan to use passenger rail as a resource, Amtrak has now stationed 24 passenger rail cars outside of New Orleans. Taken out of storage and updated to meet Federal Railroad Administration standards, with funding from the FRA, the standby cars could carry nearly 2,000 people in the event of an evacuation. “They are designed to be deployed on short notice,” Magliari said.

The city would be responsible for processing eligible passengers (ambulatory individuals without pets) as well as providing for shelter at the train’s destination. Amtrak would simply run as many trips as it could between the affected area and safe ground. “There is a newer plan in place now, and it has much more to it,” he said, including a mechanism for getting people to the trains. “It’s an entirely different picture.”

The six freight railroads that serve the New Orleans area, a crucial hub for freight traffic, were prepared for Katrina. They stationed supplies outside the storm area, and were ready to repair damaged track — and did so in record time. After the destruction caused by Hurricane Katrina, freight railroads were up and running, except for within the city of New Orleans, within days, according to published reports from the Association of American Railroads.

According to Tim Cooper, assistant superintendent for rail operations in Amtrak’s southwest division, the freight were an important partner in the evacuation from New Orleans, just as they were in the Hurricane Rita effort. “BNSF basically did everything they could to help us out in Lafayette,” he said.

“In the aftermath of these hurricanes, public officials need to consider relying more heavily on passenger rail for evacuations,” a NARP newsletter stated soon after the hurricanes hit. “Realizing rail’s potential means developing plans so that railroad and public officials don’t have to ad lib every decision, and so that available equipment can handle as many passengers as possible.”

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The evacuation from the Gulf Coast both before and after Katrina will be long scrutinized, and emergency officials will work to provide recommendations for how plans could be improved in anticipation of future emergencies. Many valuable lessons were learned through the tragedy of Katrina, and passenger rail is now better prepared to act as vital transportation from danger to safety in that region, according to officials on the front lines of preparedness. “Rail is an integral component of the federal evacuation capability for south Louisiana,” Pearce said.

Case Study #3
Hurricane Rita

Rail was a vital evacuation tool in the hours preceding the landfall of Hurricane Rita, which followed closely on the heels of Katrina and slammed into parts of Texas and Louisiana on Sept. 24, 2005. President George W. Bush declared a state of emergency soon after the hurricane began to ravage the Texas coast that day.

Unlike during Hurricane Katrina weeks before, advance warning of the Category 3 hurricane allowed emergency officials to begin evacuating the Houston area before disaster struck, spurring the largest evacuation in Texas history. But roads were soon gridlocked as nearly three million people attempted to evacuate from the Gulf Coast, fearing the devastation caused by Katrina’s recent terror.

According to the National Hurricane Center, seven fatalities resulted from the hurricane itself. But about 100 people died while evacuating from Houston and other areas before Rita hit, many in accidents and from heat exposure on the roadways. A bus accident and subsequent explosion killed 23 nursing home residents as they attempted to evacuate on Interstate 45 near Dallas on Sept. 23, 2005.

Area highways were vastly overcrowded, and vehicle breakdowns were common. Delays as long as 24 hours caused many cars to run out of gas, and car rental companies soon ran out of vehicles for those desperate for a way out. Others, upon hearing about the difficulty of leaving the area, simply gave up and opted to ride out the storm.

“As Rita was coming, it occurred to people that there had to be a better way than to tell everyone to get in the car and drive,” Magliari said.

Trinity Railway Express (TRE) was quick to answer the call for help, with the aid of Amtrak, Magliari said. TRE, which normally runs between Fort Worth and Dallas, redirected a commuter train to run between Houston and Dallas, bringing people out of harm’s way before the storm arrived. According to the FHWA report to Congress, about 450 people made it to safety on the TRE special train. Upon arrival in Dallas, personnel from Amtrak and Burlington Northern Santa Fe railroad (BNSF) were there to greet them and direct them to buses, according to TRE personnel.

“When people were running out of gas and breaking down on the highway, the commuter train was running people back and forth to Dallas safely,” Magliari said.

Amtrak also helped evacuate about 300 citizens on its Sunset Limited line, which includes track from Houston west to San Antonio. Cooper said the train trip, which takes about five hours under normal conditions, was much quicker than attempting to maneuver 200 miles on Interstate 45.

“That was another means of transportation when everything else was gridlocked,” he said. Passengers boarded without incident and there were no injuries or deaths sustained by those evacuated by train, he added.

Amtrak worked closely with the Union Pacific railroad, which owns that stretch of track, during the evacuation. Cooper participated in two meetings with the freight railroad this spring; the two companies are working to develop plans for evacuation of the Brownsville and Corpus Christi areas in Texas. “The railroads have been very open and supportive of any effort to help the evacuees,” Cooper said.

Midwest Interstate Passenger Rail Commission

Bringing Preparedness into the 21st Century

Increasing the efficiency of an emergency response effort requires advance preparation, considering factors such as shelter, food and water, and transportation. The Ohio Emergency Management Agency, for example, is in the process of rethinking its transportation strategies, spurred by a recent disaster drill. While reviewing its emergency plan in 2006, some personnel in the OEMA began to look into rail as a possible evacuation resource, said Chief of Public Affairs C.J. Couch.

Couch’s challenge is that the state doesn’t have much passenger rail service, outside of tourism and sightseeing trains. And his state isn’t alone. Most states in the Midwest have infrequent rail service, which cripples the states’ – and the region’s – ability to provide rail transportation in a moment of need.

But two visionary proposals could dramatically improve the region’s rail capabilities. If the proposed Ohio Hub plan were fully implemented, Ohio would become part of a network of rail lines that would link its five major cities, as well as connect to East Coast corridors. The 860-mile system would include four intercity travel corridors, with Cleveland as a hub for service, several times a day, to Cincinnati (through Dayton), Detroit, Toronto (through Buffalo) and Pittsburgh. The system would also be integrated into the area’s air, highway and public transit networks.

“The frequency of service and the number of trainsets to cover this kind of service could prove valuable in an emergency,” Nicholson said.

Until funding is secured and implementation of that project gets underway, the use of passenger rail in the event of a disaster will be limited. Necessary infrastructure, such as platforms at key loading points, doesn’t yet exist in at least three of the state’s major cities, Nicholson said.

If the Ohio Hub project were completed, passengers would be able to board trains in Cleveland, Detroit, Columbus, Dayton and Cincinnati, and points in between, quickly and safely. Evacuees from Cleveland could be in Columbus, for example,
in just under two hours. In the event of a statewide emergency, passengers could travel from Cleveland to Pittsburgh in two hours, and from there could connect to Amtrak’s Keystone Corridor, where they could continue on to major cities on the Northeast Corridor, such as Washington, D.C., New York and Boston.

Perhaps most importantly, 23 passenger trainsets would be permanently located in Ohio – in case of disaster, those trains could be routed to needed areas. According to Nicholson, trains could get anywhere in Ohio in two and a half hours or less on the Ohio Hub system. Right now, Ohio only has passenger trains that pass through the state as part of long-distance service on the Capitol Limited (Chicago to Washington, D.C.), the Cardinal (Chicago to New York), and the Lake Shore Limited (Chicago to Boston and New York), which together serve seven Ohio cities, but only once per day or less.

What’s more, the Ohio Hub project is slated to connect to another major rail plan that could drastically change transportation our region: the Midwest Regional Rail System (MWRRS).

The Midwest Regional Rail Initiative is a comprehensive plan to bring passenger rail back as a major component of transportation in this region. Sponsored by the transportation agencies of nine Midwestern states – Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Nebraska, Ohio and Wisconsin – the unprecedented proposal would launch rail travel into the future.

The plan would create convenient links between Midwestern cities and towns, using Chicago as a hub. The system is expected to carry 13.6 million passengers each year on a 3,000-mile network that would connect points within the region and improve access into and out of the Midwest by rail. Improvements to track and signal crossings would also dramatically improve train trip times. Beyond its economic, environmental and quality-of-life benefits, the MWRRS could be a component of a regional – and even national – emergency response protocol.

If the MWRR and Ohio Hub plans were implemented, together they would include 17.4 million annual train miles (more than half of Amtrak’s current passenger rail service for the entire nation) and connect 150

### Midwest Regional Rail System Frequencies and Trip Times

<table>
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<tr>
<th>Corridor</th>
<th>Current Daily Rountrips</th>
<th>MWRRI Daily Rountrips</th>
<th>Roundtrip Increase</th>
<th>Current Rail Trip Time (Fastest)</th>
<th>MWRRI Rail Trip Time (Express)</th>
<th>Time Decrease</th>
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Source: Amtrak and TEMS, Inc.
communities, said Alex Metcalf, president of Transportation Economics & Management Systems (TEMS), Inc., which conducted studies and planning for both projects.

Increased frequencies would bring 86 trainsets to the region – 63 on the MWRSS and 23 on the Ohio Hub system; 19 of those will be replacements of current trains, Metcalf said, leaving a total of 67 additional trains that will be added to the current system. In concert with the upgrades that will be made to existing tracks and trainsets, the region will have far more resources on hand in the event of an emergency.

“When you have well-developed passenger service, then you have lots of cars that can be put into emergency use,” Capon said.

Under the current system, the only trainsets available to many Midwestern states are those that are traversing the country on Amtrak’s long-distance lines. The MWRR and Ohio Hub systems could help ensure that more trains would be available more quickly if they were needed in response to a disaster. Trains would be managed in a “rolling stock” system, meaning that each corridor would receive a dedicated number of trainsets, which could be substituted in and out of the system for routine maintenance or repairs.

While several corridors, such those in Michigan and Wisconsin, have trainsets dedicated to those lines, many corridors in the region share trains. Under the completed MWRR and Ohio Hub systems, corridors would be assigned a certain number of trainsets, and could be guaranteed the availability (and proximity) of those trains in an emergency.

If there were an emergency in St. Louis, for example, seven trains would be readily available on the line to Chicago. If an evacuation was necessary, those trains, with just one trip each, could carry 3,500 people out of St. Louis to Chicago and cities in between. There would also be five trains available on the Kansas City-St. Louis line, which could evacuate 2,500 people with one trip per trainset. Depending on how far away those trainsets are, trains out of St. Louis could bring 6,000 people out of harm’s way in a matter of hours, and there is the possibility that trains could run multiple evacuation trips.

“The U.S. needs a useable, standby fleet of cars. Until about 1970, a large, reserve fleet of older intercity passenger cars was available for use during holiday peak loads, and for emergencies. Such a fleet no longer exists,” a NARP newsletter commented after the Gulf Coast hurricanes.

**Available Trainsets Under the Midwest Regional Rail and Ohio Hub Systems**

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</tbody>
</table>

**Combined Total** | **86**

Source: TEMS, Inc.

**The Case for Rail**

Rail has proven successful in past evacuations, and could become a key part of the Midwest’s emergency preparedness plans, especially if the system is upgraded. Rail provides many benefits that make it an important part of emergency planning:

**Capacity.**

One of the hurdles often cited by emergency management professionals is that in the event of an emergency, the region’s current system makes few trainsets available for dispatch to an affected area. Limited frequencies in most of the Midwest make trains few and far between, and the likelihood is high that a trainset won’t be close by when it’s needed.
When Ed Gray, a 20-year emergency management veteran at Missouri’s State Emergency Management Agency, considers rail evacuation in Missouri, he takes into account that at any one time there are few trainsets in the area that could be diverted in the case of a disaster. In the event of an earthquake, for example, geography dictates that the chances are low that many trains will be on the right side of the fault line, complicated further by the distinct possibility that bridges and overpasses will be closed.

“What’s going to happen is that any [trainsets] that are on our side when the earthquake hits, we’ll be able to use,” Gray said. The implemented Midwest Regional Rail System would guarantee that five regional trains dedicated to service between Kansas City and St. Louis would be available, in addition to seven more on a line from St. Louis to Chicago.

Beard sees the same hurdle on the national scale: the number of available trainsets is limited. When local officials approach him about using Amtrak as an evacuation route, he says they are often surprised by the barrage of hypothetical questions about the disaster being planned for – and the equipment that could be available at any given moment. “Our response is, OK, what time of day?” Beard said. “If it’s at midnight, you have a few less [trainsets]. On the weekends, you have a few less. It all depends on the time of year, of week, of day.”

But, with the proper funding and a vision toward the future, the lack of trainsets could be a thing of the past. The MWRR and the Ohio Hub systems together would more than quadruple the number of trains available in the region by adding 67 trainsets to the Midwest rail system.

While the average transit bus can hold about 40 people, each of the new trainsets would include four cars and could carry up to 500 people in an emergency, according to TEMS’ Metcalf. With the MWRR and Ohio Hub passenger systems in place, “you have the potential to move a lot of people very quickly,” Metcalf said.

Shelter.

An additional consideration emergency planners always take into account is coordination of end points – providing food, water and shelter wherever the train brings evacuees. When a large number of people are left without belongings or forced to leave their homes, a relief effort becomes even more daunting. In the wake of hurricanes Katrina and Rita, many cities in Texas were overwhelmed with evacuees and didn’t have the resources to accept such a large number of people in their communities.

In the Midwest, an extensive and well-maintained rail system could help avoid that issue. Evacuees could find refuge in the hundreds of cities that would be serviced under the MWRR and the Ohio Hub systems. Good planning could assure that no one city is overburdened by the relief effort.

Safety.

Incidents like the deadly bus accident during the evacuation from the Texas coast underscore the issue of safety. While more than 100 people are estimated to have died in the Rita evacuation alone, there were no deaths reported in the train evacuations either on Sept. 11 or during the Gulf Coast hurricanes of 2005.

According to the National Safety Council, trains are one of the safest modes of transportation. Trains are 27 times as safe as automobiles; while .8 fatalities are reported per 100 million passenger miles in automobiles, .03 deaths occur on trains for the same number of miles traveled. When disaster strikes, safety is a top priority for relief efforts, and passenger rail can significantly reduce the excess fatalities that occur. The U.S. Department of Transportation’s latest fatality statistics report that rail accounted for less than .01 percent of all U.S. transportation deaths in 2003.8


With the proper funding and a vision toward the future, the lack of trainsets could be a thing of the past. The MWRR and the Ohio Hub systems together would more than quadruple the number of trains available in the region by adding 67 trainsets to the Midwest rail system.
Diversity.

A recent report conducted by the American Highway Users Alliance\(^{11}\), a group advocating improvements to U.S. highways, gave most urban areas failing grades in terms of their preparedness to evacuate a large population. Among those ranked the worst were Chicago, Detroit, Minneapolis-St. Paul, St. Louis and Milwaukee. Those cities’ road systems, according to the report, would not be prepared to accommodate a mass exodus from major metropolitan areas.

The Midwestern cities that would be serviced by the MWRR and the Ohio Hub systems would have another way out. The system would serve 150 communities, some of them rural, and “many of which don’t have any air service or any other way out besides by auto,” Metcalf said.

Increased use of rail, both on a daily basis and in the event of an evacuation, frees up crowded highways and allows more people to move quickly from one place to another. Those that don’t own cars are at a severe disadvantage in a region whose plans rely on an overtaxed highway system, as was evidenced during the evacuation efforts of the Gulf Coast, when many were stranded. Those that could drive endured high heat, extreme delays, accidents and even deaths on the bursting highways. Such unnecessary tragedy could be avoided in the Midwest if the passenger rail system is utilized as another transportation option.

“If you need to move a whole bunch of things in one fell swoop, [rail] is a lot more useful than a highway,” Nicholson said. “It’s a far more viable option.”

Comfort.

Trains can move a large number of people more quickly – and often more comfortably – than buses, automobiles and airplanes.

When passengers were evacuated by train in Texas, not only were those passengers safe, they were comfortable, said John Bertini, a NARP member and physician who helped load the trains. “Many passengers complemented the cool spacious cars,” he said in a NARP update on evacuation efforts. The “roominess, comfort and relative speed the trains afforded these folks makes rail an ideal means to evacuate.”

Disaster Response in the Midwest

The Sept. 11 attacks created a transportation crisis in the New York City area, but also throughout the nation. Air traffic, a major mode of U.S. transportation, was completely shut down for days after the attacks, and millions of


The Empire Builder: A Lifeline for North Dakota

On October 5, 2005, Amtrak was a lifeline for residents of Minot, North Dakota. When a snow storm closed area highways and airports, Amtrak’s Empire Builder was the only mode of transportation available to travelers.

The experience in Minot “epitomized the essential transportation that passenger trains provide for communities large and small across the nation,” Capon said in a press release from the NARP. “The Empire Builder often provides mobility when other modes of transportation are not an option. Moreover, the train is by far the safest way to travel in bad weather.”

Snow storms, which so often hit the Midwest, are an ideal opportunity to use rail transportation, because trains can run even if weather conditions are less than favorable for air and auto travel. As long as people can get to the train station, Beard said, passenger rail can help people get to their destinations safely.

North Dakota is served only by Amtrak’s Empire Builder line, however, with one train running through the state in each direction per day. Evacuating residents on short notice would be difficult under the current passenger rail service, unless the state saw increased frequencies and/or additional lines.
people were forced to consider other options for getting to their destinations throughout the country.

Two Midwestern anecdotes from the day of the Sept. 11 terror attacks demonstrate, in one case, the enormous potential for passenger rail — and in the other case, how a lack of passenger rail options can hinder evacuations.

Metra, a commuter rail service in the Chicago area, worked on Sept. 11 to evacuate the downtown area as fears spread that other major cities could be targets of further attacks. Though Sept. 11 was sudden and unpredictable, Metra worked quickly to implement an evacuation plan.

The rail company abandoned its normal weekday schedule and began to run outbound trains on a “load-and-go” basis. Metra completed 15 additional trips out of downtown Chicago that day, according to Tom Miller, senior media specialist with Metra.

“The atmosphere was calm for the most part,” he said. “…[W]e had a flood of people leaving. It was like rush hour at 9:30 a.m. …Metra was an extremely important form of transportation on this hectic day. …We typically carry about 150,000 passengers into the city each weekday. Many of these people who decided to exit the Loop mid-morning relied on the train to get them home. How else were they to get home?”

That same day, as flights began to land simultaneously throughout the country, Ohio’s Port Columbus Airport became filled with stranded passengers after 20 flights were diverted to Columbus. The Central Ohio Transit Authority (COTA) brought air passengers into the city on shuttle buses, said Nicholson, who worked for COTA at the time.

Most of the bus drivers returned with the same story: passengers were looking for rail connections. “The first thing most passengers asked them was if the bus would take them to the Amtrak station or to the train station,” he said. “These passengers were incredulous when they found out that Columbus not only didn’t have a station, but also hadn’t had passenger rail service since the mid-1970s. What an image to leave with over 2,000 guests to our city.”

**Responding Regionally**

The effective use of the Northeast Corridor, the epitome of a regional rail system, on Sept. 11 highlights the need for regional cooperation in disaster response. “We must learn how to respond collectively and regionally,” said Dale Shipley, a former FEMA Region V director and a consultant to the Department of Homeland Security. Shipley also works with the National Emergency Management Association, which helps state emergency directors better prepare for emergencies, disasters and threats to national security.

Passenger rail could be an important component of regional emergency plans. With most trips in the Midwest taking about five hours or less, regional transit times under the MWRRS would be similar to those among major cities on the Northeast Corridor. Especially when linked with the Ohio Hub system, the MWRRS would provide even more options than the Northeast Corridor. Passengers could travel from Chicago to Detroit, for example, in about the same time it takes to get from New York City to Boston. A trip from Chicago to Milwaukee would be comparable to a trip from Washington, D.C., to Philadelphia.

**Preparing the Emergency Planners of Tomorrow**

Mike Casagrande, coordinator of homeland security at Kankakee Community College in Illinois, sees such a potential for the use of rail in emergencies that he has made it a vital part of the training necessary for students to complete an associate’s degree in emergency management at the northern Illinois college. Because of the college’s proximity to several rail lines, Casagrande hopes the institution can one day be used as staging center for emergency responders. If there were a disaster in Chicago, for example, trains could be dispatched to and from Kankakee’s Level I trauma center.

The school is in the midst of creating a regional training center, Casagrande said. On the half a dozen rail lines available to him and his students, emergency personnel could have access to an airport and interstate, a redundancy of transportation he said is necessary for efficient emergency response.

“If you think about natural disasters, or man-made disasters, one of the potential problems you would have is access through the interstate,” Casagrande said. “But if there were an agreement through rail lines, responders would have a means of getting to Chicago without necessarily taking the highways.”

Part of the planning process will include forging those relationships with Amtrak, Metra commuter rail and freight companies, Casagrande said. He also pointed to the possible industry that could be created by preparing pre-packaged emergency supplies fit for travel on rail lines.

“There is a potential for rail to be invaluable in emergency management,” he said. “If you think outside the box a little bit, you can see all the different applications.”
Preparing in the Midwest

In the wake of events like Sept. 11 and the Gulf Coast hurricanes, emergency planners throughout the nation have worked to ensure the safety of their localities, states, and regions. Planners in the Midwest, for example, carefully assess likely disasters that could occur in, and may be specific to, our region.

“You’ve got to ask, ‘What things could happen to us and how bad could it be?’ said Glen Woodbury, a faculty member at the Naval Postgraduate School’s Center for Homeland Defense and Security. “Looking at the hazards that face you is really the first step in the planning process.”

Having a comprehensive, regional disaster plan that includes a designated protocol for transportation and evacuation may be even more crucial in the Midwest, where likely events such as severe weather are largely unpredictable.

Emergency planners in the Midwest face a unique set of possible scenarios, quite different from those considered by southern, eastern and western states. The Federal Emergency Management Agency (FEMA) considers severe weather, such as tornadoes, flooding and blizzards, the most plausible types of disasters for the region. As with the nation as a whole, the Midwest could also fall victim to a terrorist attack or a nuclear event at one of the region’s 20 active nuclear power plants.

FEMA is also exploring the likelihood of an earthquake along the New Madrid fault line, and considers it a “priority” for preparedness activities. Scientists are closely monitoring the fault zone, which includes parts of Illinois, Indiana and Missouri in the Midwest.

<table>
<thead>
<tr>
<th>Declared Disasters in the Midwest Since 1953</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>State</strong></td>
</tr>
<tr>
<td>Ohio</td>
</tr>
<tr>
<td>Illinois</td>
</tr>
<tr>
<td>Minnesota</td>
</tr>
<tr>
<td>Missouri</td>
</tr>
<tr>
<td>Iowa</td>
</tr>
<tr>
<td>North Dakota</td>
</tr>
<tr>
<td>Kansas</td>
</tr>
<tr>
<td>Indiana</td>
</tr>
<tr>
<td>Nebraska</td>
</tr>
<tr>
<td>Wisconsin</td>
</tr>
<tr>
<td>South Dakota</td>
</tr>
<tr>
<td>Michigan</td>
</tr>
<tr>
<td><strong>U.S. total</strong></td>
</tr>
</tbody>
</table>

Source: Federal Emergency Management Agency

A series of earthquakes devastated the region in the early 1800s, and according to the Central United States Earthquake Consortium (CUSEC), the probability of another earthquake in the area is “high.” Scientists believe, in fact, that there is a 25 to 40 percent chance the region will experience an earthquake with a magnitude of 6.0 or larger in the next 50 years, according to CUSEC. “This would be our Katrina,” Gray said.

And chances are, a disaster in the Midwest would be largely unpredictable, a sharp contrast to the kind of weather experienced in coastal areas. “There is not the sort of vulnerability to severe weather that is predictable [in the Midwest],” Magliari said. “The nature of a hurricane gives you some predictability.”

“There are a lot of things that play into evacuating by train,” said Beard, adding that although passenger rail can be a tool in emergency preparedness, there are often challenges. When a large number of evacuees are present, state, local and regional officials must work together to determine where they will go, and how the towns accepting evacuees will provide food, water and shelter. Emergency operations must be carefully coordinated – before disaster strikes – with the freight companies that control the tracks emergency planners might want to use as evacuation routes.

Conventional wisdom, of course, says trains are bound to existing tracks, and can’t run on damaged track. But even that kind of damage isn’t as much of a hurdle as it once was. Much of Class I railroad track is now continuously welded rail and is more easily repairable than older, jointed rail. As was dramatically seen in the wake of Hurricane Katrina, literally miles of welded rail was lifted out of the water, realigned and placed back on new ballast. Trains were up and running within ten days of the hurricane’s strike on the Gulf Coast.

Funding the System

During the last two and a half decades, funding for both federal highway programs and aviation more than doubled, while money allocated for passenger rail decreased by 27 percent, according to the NARP. For all of the annual Congressional debate over reauthorizing funding for Amtrak, its total budget still amounts to less than 2 percent of the total federal transportation budget.

But an equally important issue is that the lack of adequate, dedicated and long-term funding not only prevents Amtrak from being able to plan and implement new and better services, but often leaves it unable to address basic infrastructure needs critical to maintain its existing system. That leaves Amtrak even less able to adequately address issues such as providing emergency response services in times of disaster.

Despite four years of record increases in ridership on most of Amtrak’s passenger lines, it still does not receive a dedicated source of federal funding that could boost passenger rail service into the 21st century. There is also no federal-level funding program for state-generated passenger rail plans such as the Midwest Regional Rail Initiative and the Ohio Hub, despite the fact that the Midwest, in particular, is ripe for passenger rail expansion. Ridership increases on Amtrak’s regional short lines demonstrate the ability to create a viable market for passenger rail service in the Midwest.

The lack of federal funding leaves states bearing much of the burden of financing passenger rail expansion in the Midwest, leaving the region devoid of a unified, cohesive network. Virtually all short-line improvements and expansion in the region have been the result of state subsidies.

States like Illinois, Michigan, Missouri and Wisconsin have met increasing demand with additional subsidies for passenger rail expansion. The state of Illinois, for example, doubled its funding of state-sponsored rail service in fiscal year 2007, adding four frequencies to popular lines from Chicago to St. Louis, Quincy and Carbondale.

Proposals like the Ohio Hub and the Midwest Regional Rail Initiative, if fully funded and implemented, could provide a critical service and improve emergency response in the event of a disaster in the nation’s Heartland. Together, these systems would cost about $11 billion to implement – a bargain in today’s transportation market. The capital costs of implementing this system are less than one-third of what the Federal Highway Administration spent in fiscal year 2005 alone.\(^\text{13}\)

These projects have the capability to turn the Midwest into a matrix of interconnected passenger rail lines, which would not only strengthen the region’s transportation system, while easing congestion and reducing our dependence on fossil fuels, but could also provide needed transportation in the event of an emergency in the region.

A Brighter Picture

“There is still no better way to move large numbers of people or large quantities of almost anything on the ground than by train,” Nicholson said. “Think of what we can accomplish with the kind of funding commitment at the federal level that now exists for highways and aviation.”

While the examples of Sept. 11 and Hurricane Rita have shown us how passenger rail systems can be a lifeline during a disaster, the Midwest rail system is not yet prepared to use that lifeline as a major mode of evacuation or emergency transportation. Many states still see infrequent train service, and the infrastructure needed for emergency planners to rely on passenger rail as a critical transportation route is not yet present.

As Beard stresses, rail is a piece of the transportation puzzle. “[Rail] can be a tool, and it’s just a matter of how you want to use that tool,” Beard said. “It can be part of the bigger picture. You just have to know it’s there.”

The two major proposals on the table in the Midwest could significantly change the way the region responds to disasters both in our region and elsewhere. A strong federal partnership with the states will advance revolutionary plans like the Ohio Hub and Midwest Regional Rail systems, making the Midwest a safer, more prepared region.

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**Ridership Increases on Midwest Amtrak Lines**

<table>
<thead>
<tr>
<th>Route</th>
<th>FY04</th>
<th>FY05</th>
<th>Increase FY04 to FY05</th>
<th>FY06</th>
<th>Increase FY05 to FY06</th>
<th>Increase FY04 to FY06</th>
</tr>
</thead>
<tbody>
<tr>
<td>State House (Chicago-St. Louis)</td>
<td>212,999</td>
<td>242,144</td>
<td>13.7%</td>
<td>262,320</td>
<td>8.3%</td>
<td>23.2%</td>
</tr>
<tr>
<td>Hiawatha (Chicago-Milwaukee)</td>
<td>460,430</td>
<td>525,239</td>
<td>14.1%</td>
<td>580,333</td>
<td>10.5%</td>
<td>26.0%</td>
</tr>
<tr>
<td>Wolverine (Chicago-Pontiac, Mich.)</td>
<td>366,291</td>
<td>406,499</td>
<td>11.0%</td>
<td>438,529</td>
<td>7.9%</td>
<td>19.7%</td>
</tr>
<tr>
<td>Illini (Chicago-Carbondale, Ill.)</td>
<td>113,281</td>
<td>127,808</td>
<td>12.8%</td>
<td>136,640</td>
<td>6.9%</td>
<td>20.6%</td>
</tr>
<tr>
<td>Illinois Zephyr (Chicago-Quincy, Ill.)</td>
<td>108,856</td>
<td>118,493</td>
<td>8.9%</td>
<td>119,719</td>
<td>1.0%</td>
<td>10.0%</td>
</tr>
<tr>
<td>Blue Water (Chicago-Port Huron, Mich.)</td>
<td>94,398</td>
<td>111,630</td>
<td>18.3%</td>
<td>123,823</td>
<td>10.9%</td>
<td>31.2%</td>
</tr>
<tr>
<td>Pere Marquette (Chicago-Grand Rapids, Mich.)</td>
<td>87,767</td>
<td>96,471</td>
<td>9.9%</td>
<td>101,932</td>
<td>5.7%</td>
<td>16.1%</td>
</tr>
<tr>
<td>Hoosier State (Chicago-Indianapolis)</td>
<td>17,934</td>
<td>20,191</td>
<td>12.6%</td>
<td>20,096</td>
<td>-0.5%</td>
<td>12.1%</td>
</tr>
<tr>
<td>*KC Mule &amp; St. Louis Mule (St. Louis-Kansas City)</td>
<td>128,084</td>
<td>136,701</td>
<td>6.7%</td>
<td>119,257</td>
<td>-12.8%</td>
<td>-6.9%</td>
</tr>
<tr>
<td><strong>Ridership Totals</strong></td>
<td><strong>1,590,040</strong></td>
<td><strong>1,785,176</strong></td>
<td><strong>12.3%</strong></td>
<td><strong>1,902,649</strong></td>
<td><strong>6.6%</strong></td>
<td><strong>19.7%</strong></td>
</tr>
</tbody>
</table>

*Note: During much of FY06, Amtrak service on this line was supplied by buses, due to major construction on the track. Source: Amtrak*
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