

---

# Efficient Movement of Goods

*Tangible Result Driver – Dave DeWitt,  
Deputy Administrative Officer*

Missouri's location in the nation's center makes it a major cross-roads in the movement of goods. Transportation infrastructure must be up to the task so that as the flow of freight becomes more efficient, businesses and communities share the economic benefits.



# Efficient Movement of Goods

## *Freight tonnage by mode*

**Result Driver:** Dave DeWitt, Deputy Administrative Officer

**Measurement Driver:** Brian Weiler, Multimodal Operations Director

**Purpose of the Measure:**

This measure tracks trends and indicates diversification of freight movement on Missouri's transportation system.

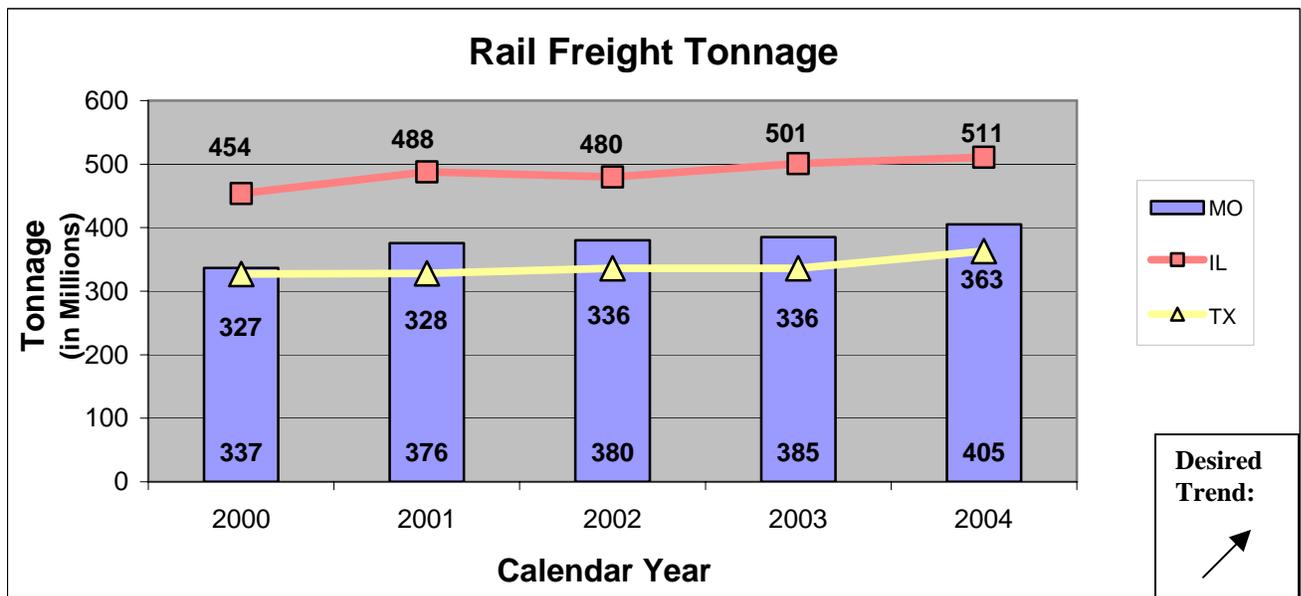
**Measurement and Data Collection:**

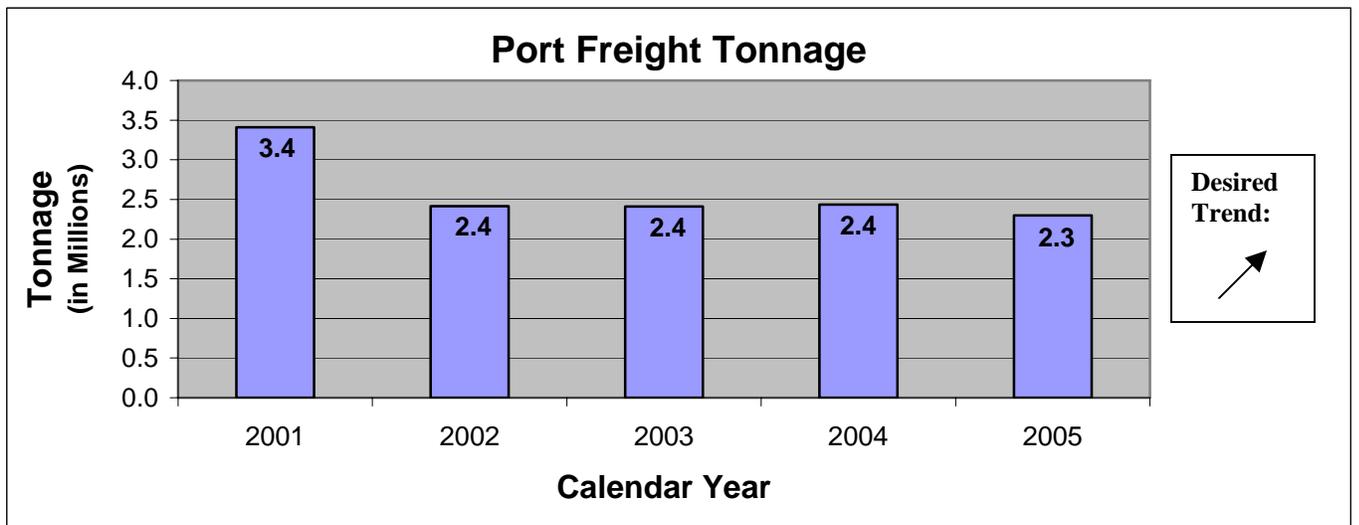
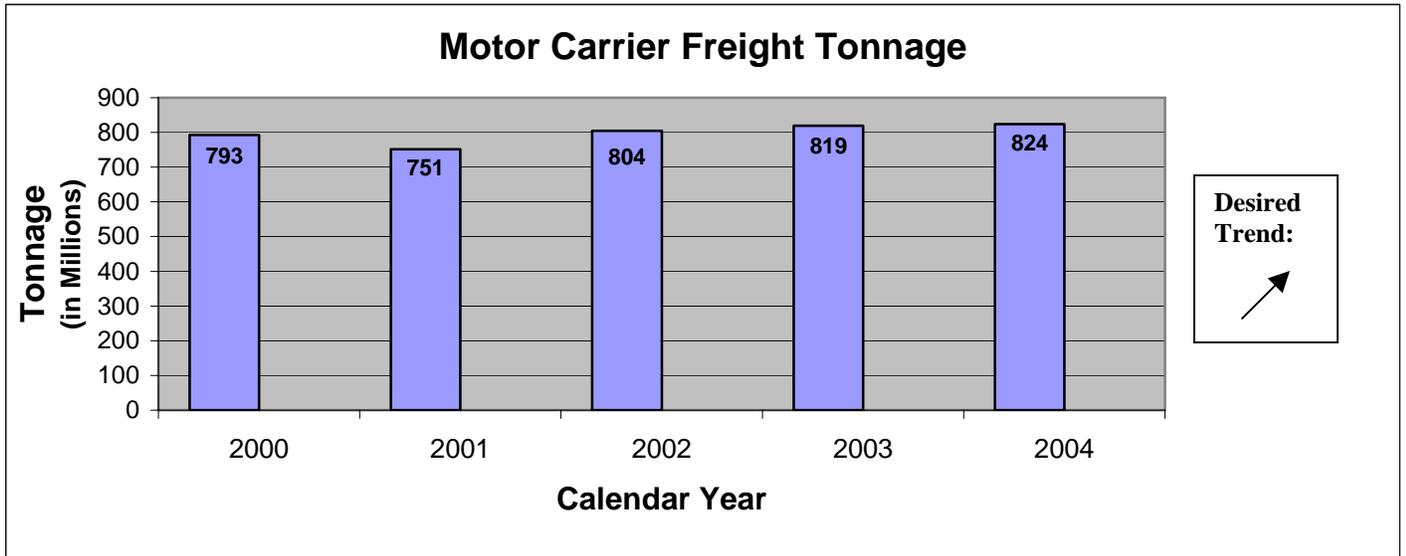
Port tonnage is reported to MoDOT from public ports. Air cargo data is collected via mail survey to commercial airports with known cargo activity. Rail tonnage is obtained from the Association of American Railroads. MoDOT calculates motor carrier freight movement using commercial vehicle miles traveled, trip length per shipment and average truck cargo weight.

**Improvement Status:**

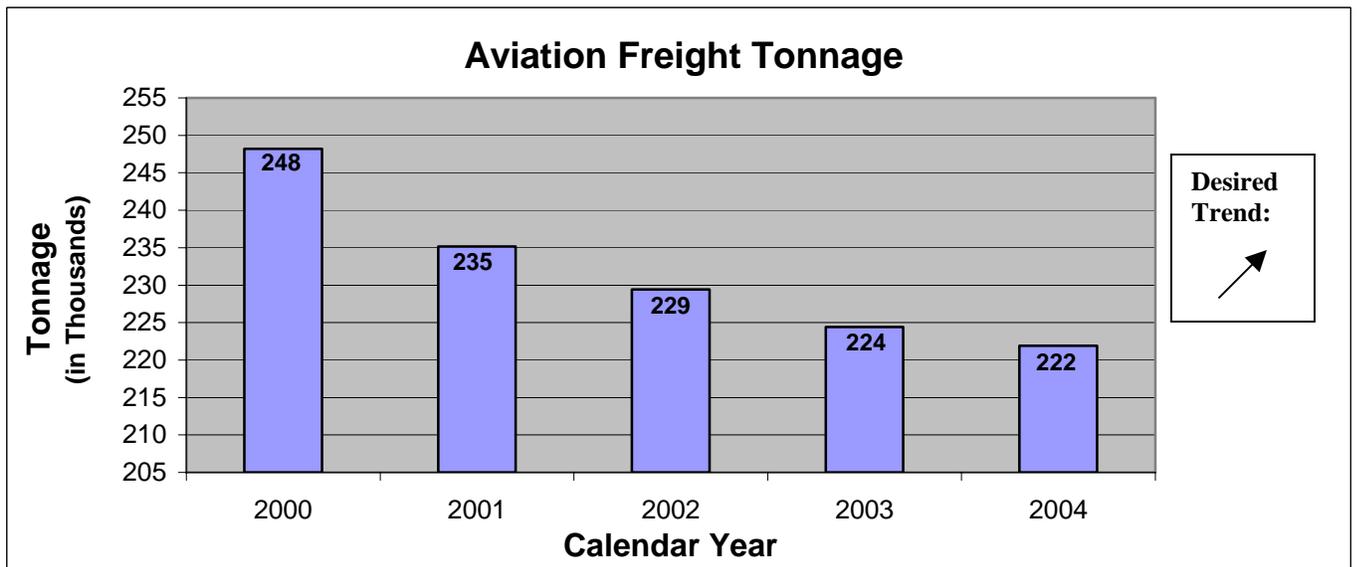
Total freight tonnage for all modes exceeds 1.2 billion tons, which reflects positive economic growth and development for Missouri. Rail freight tonnage grew 5 percent from 2003 to 2004 and demand remains strong despite system capacity issues. Missouri does not currently invest public funding in private rail infrastructure; however, MoDOT has supported efforts to remove rail system bottlenecks, such as the Kansas City Flyover Project and adding a second bridge on the Union Pacific mainline over the Osage River. Motor carrier freight tonnage has experienced steady growth since 2001. The 2005 data is not yet available to determine if higher diesel fuel costs will negatively impact motor carriers' tonnage amounts. MoDOT has implemented several process improvements and outreach efforts to streamline motor carrier registration and inspection services.

Port tonnage has remained relatively steady since 2001 despite low flows on the Missouri River. Preliminary 2005 amounts show a slight decrease due primarily to navigation impacts on the Mississippi River from Hurricane Katrina. Long-term growth of river transportation is hampered by an inadequate lock and dam system on the Upper-Mississippi River above St. Louis. MoDOT continues to support a federal proposal from the Corps of Engineers to update and expand this system, which is currently being considered by the U.S. Congress. Aviation tonnage continues to be impacted by a down-turn in the aviation industry from 9-11 and the resulting financial impacts to airlines, which carry a significant portion of air cargo. Commercial airports fall under the jurisdiction of the Federal Aviation Administration; however, MoDOT's Aviation Advisory Committee helps identify ways to better support the commercial aviation industry.





*\*2005 port tonnage based on preliminary information.*



## Efficient Movement of Goods

### *Average travel speeds for trucks on selected roadway sections*

**Result Driver:** Dave DeWitt, Deputy Administrative Officer

**Measurement Driver:** Michelle Teel, Technical Support Engineer

**Purpose of the Measure:**

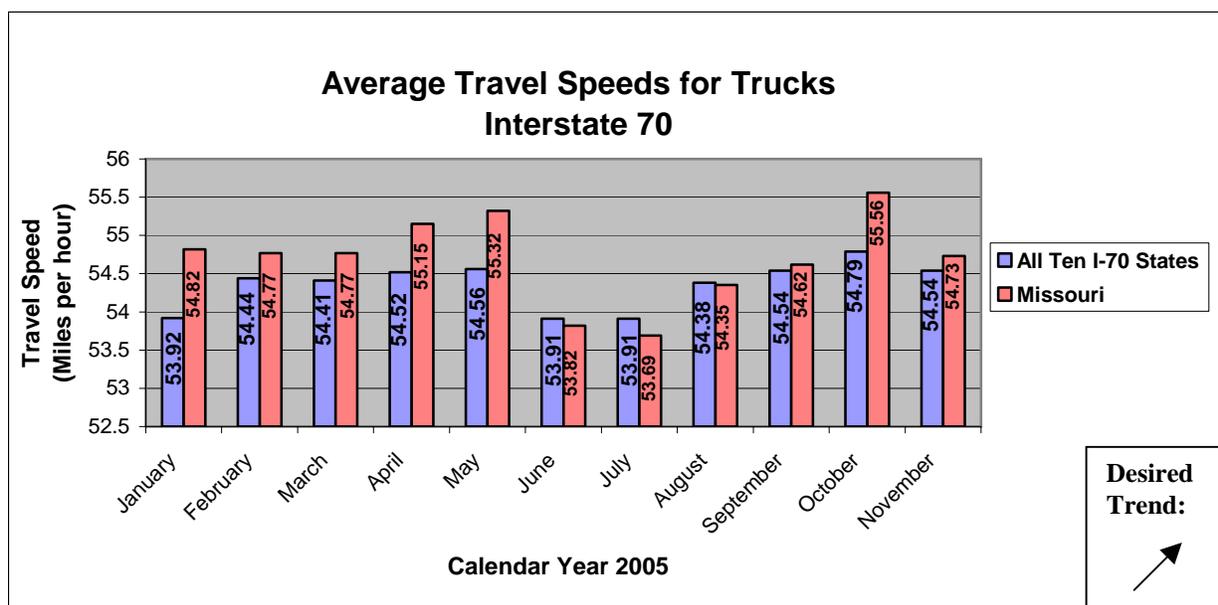
This measure tracks average truck travel speeds on selected roadway sections. Monitoring travel speeds is a tool for improving transportation system performance. MoDOT recognizes that the efficient movement of trucks is critical to the economy. Timely, reliable goods movement allows businesses to reduce manufacturing and inventory costs and to improve responsiveness to rapidly changing markets and consumer desires.

**Measurement and Data Collection:**

The Federal Highway Administration (FHWA) launched the Freight Performance Measure initiative to monitor travel speeds in freight-significant corridors, including Interstate 70. In 2002, FHWA established a partnership with the American Transportation Research Institute (ATRI) to determine whether and how information from communications technologies used by the freight industry could provide data to support freight performance measures. ATRI worked with technology vendors and commercial carriers to demonstrate that location data from communications technologies can be used to derive measures of travel speeds. After removing all information except time and location from the satellite data stream, ATRI measured average travel speeds. The data provided is preliminary research data from FHWA. Additional Missouri routes may be added in the future, including Interstates 55, 57, and 35.

**Improvement Status:**

To help improve truck travel time, live traffic data for three Missouri metro areas is available on MoDOT’s website at [www.modot.gov](http://www.modot.gov) in the Services Section under Traveler Services. Kansas City Scout provides traffic information for Kansas City, Gateway Guide provides traffic information for St. Louis, and Ozarks Traffic provides traffic information for Springfield. Preliminary research data including truck travel speeds is available from FHWA on Interstate 70 across the nation. This data allows us to measure Missouri’s truck performance on Interstate 70 as compared to the entire Interstate 70 corridor. Due in part to an increase in the number of Missouri work zones this summer, travel speeds decreased slightly in June through August. The desired trend is an increase in average travel speeds, as long as it they do not exceed the posted speed limit.



## Efficient Movement of Goods

### *Percent of trucks using advanced technology at Missouri weigh stations*

**Result Driver:** Dave DeWitt, Deputy Administrative Officer

**Measurement Driver:** Barbara Hague, Special Project Coordinator

**Purpose of the Measure:**

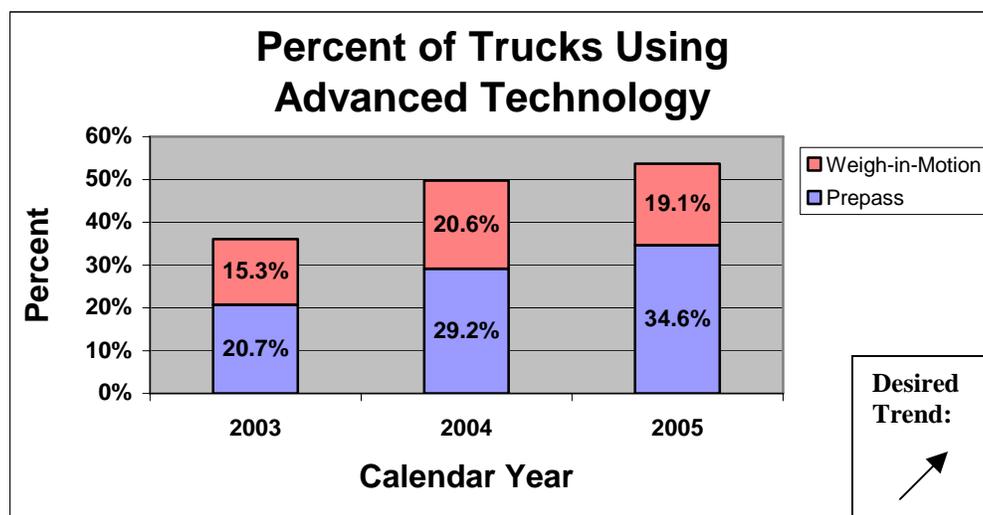
This measure indicates motor carriers' acceptance of tools designed to improve the flow of freight traffic on Missouri highways.

**Measurement and Data Collection:**

Data is collected by HELP, Inc.'s PrePass system computers which scan transponder-equipped vehicles as they approach 19 Missouri weigh stations. Pavement sensors check the vehicle's weight while computers review MoDOT's records to determine the carrier's compliance with safety, insurance and other state and federal regulations. Drivers are notified to stop or are allowed to continue without delay. Carriers that comply with state and federal regulations save time and money. The Missouri State Highway Patrol provides a quarterly measure of the number of trucks that use Missouri's weigh-in-motion scales located at Mayview and Foristell. These scales measure weight as trucks pass over them at 40 m.p.h. Using ramp scales rather than verifying weight on fixed scales that require a full stop saves both time and money.

**Improvement Status:**

For the first time in Missouri, participation in the PrePass system exceeded 200,000 vehicles in each month of the last quarter of 2005. The trucks were allowed to proceed without the need to enter fixed weigh facilities. The number of vehicles weighed on the slower weigh-in-motion ramp scales shows a decrease from 2004 because of equipment failure during the first two quarters in 2005. MoDOT asked Help, Inc. to consider accepting carriers' compliance data more frequently than the current quarterly reports. More up-to-date information would allow carriers who have recently come into compliance to be able to by-pass weigh facilities and avoid the corresponding travel delay.



## Efficient Movement of Goods

### *Interstate motor carrier mileage*

**Result Driver:** Dave DeWitt, Deputy Administrative Officer

**Measurement Driver:** Joy Prenger, Accounting Services Supervisor

**Purpose of the Measure:**

This measure reports the fluctuations of motor carrier freight movement in Missouri. MoDOT uses the information to help facilitate freight movement and to monitor quarterly fuel tax rate(s) and carriers' voluntary compliance with fuel tax requirements.

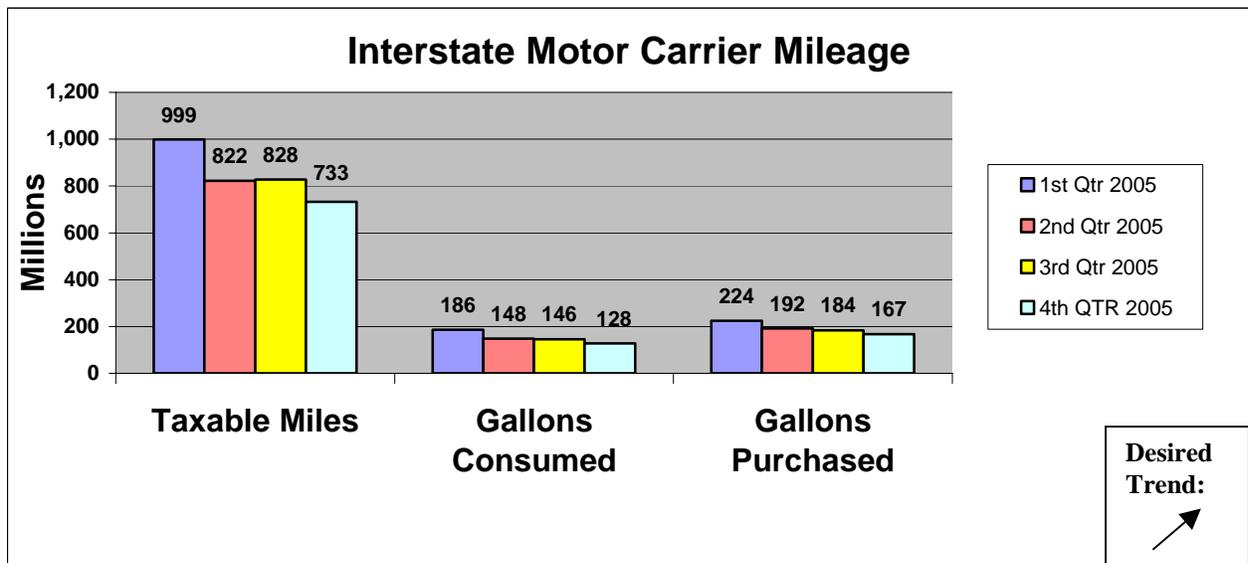
**Measurement and Data Collection:**

Data is collected quarterly. Total taxable miles traveled in Missouri by Missouri-based carriers and carriers based in IFTA (International Fuel Tax Agreement) member states and provinces are tracked using IFTA tax returns and member state and provinces' monthly transmittals. This information is used to reflect freight movement, support revenues and to track usage from the motor fuel tax refund appropriation.

**Improvement Status:**

During the fourth quarter of 2005, the reported fuel price average for the Midwest region was \$3.144 per gallon compared to the current average of \$2.408. The fourth quarter indicates a slight decrease in motor carrier travel due to higher fuel costs.

MoDOT Motor Carrier Services is testing a computer program that was designed to allow carriers to file their first quarter IFTA fuel tax returns and to make payment through our Internet-based system. MoDOT signed an agreement to join the IFTA Clearinghouse. The clearinghouse facilitates electronic exchange of registration information and fees, thereby reducing postage, printing and envelope costs. It also provides error-free data exchange and netted accounting settlements. Clearinghouse data allows Missouri to compare its national rank in motor carrier mileage, fuel purchases and fuel consumption with our eight border states. That data will be available by summer 2006.



## Efficient Movement of Goods

### *Percent of satisfied motor carriers*

**Results Driver:** Dave DeWitt, Deputy Administrative Officer

**Measurement Driver:** Mary Jo Pointer, Motor Carrier Manager

**Purpose of the Measure:**

This measure tracks MoDOT's progress toward the goal of expeditiously meeting the needs of the motor carrier industry and facilitating freight movement. MoDOT's Motor Carrier Services team uses the data to identify opportunities to improve customer satisfaction.

**Measurement and Data Collection:**

MCS personnel, working with the Missouri Transportation Institute, developed a survey to collect customer satisfaction data. A single survey addressed all four MCS program divisions, International Registration Plan/International Fuel Tax Agreement, Over-dimension/Over-weight Permitting, Safety and Compliance and Operating Authority. Survey respondents identified the service(s) they use when doing business with MCS, then indicated their level of satisfaction with 12 customer service factors such as "timely response", "friendly", "respectful", and "outcome". They also gave an "overall satisfaction" score. Customers used a four-point scale ranging from 4=Very Satisfied to 1=Very Dissatisfied.

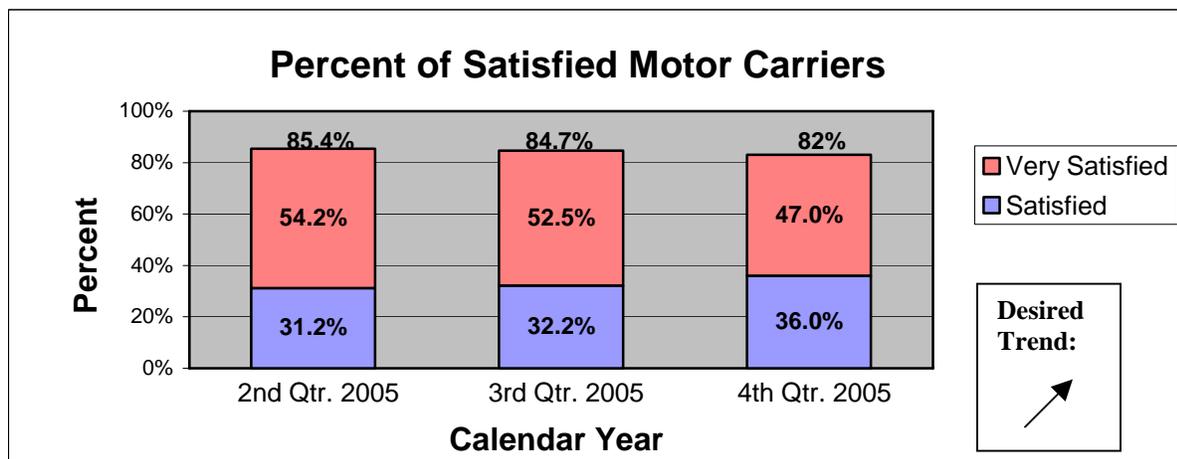
**Improvement Status:**

MCS customers reported satisfaction levels at 82 percent, with 47 percent "very satisfied". It is expected that the satisfaction level will stay consistent until full external implementation of the new Web-based computer system is complete.

The most important factors related to overall customer satisfaction include "service issue resolved", "satisfactory outcome" and "timely service". OD/OW customers reported significantly lower levels of satisfaction. However, the ratings for "service speed and convenience" increased, mainly because OD/OW customers were able to apply for permits online beginning in the last quarter of 2005.

To improve its service, MCS made improvements including:

- Increased use of e-mail and FAX delivery of credentials and other notifications.
- Acceptance of credit cards
- Adjustments to staff hours to ensure all fully complete OD/OW permit requests received by 4:00 p.m. are processed and returned to the customer the same day.
- Providing Web-based access for customers registered under the International Registration Plan.



## Efficient Movement of Goods

### *Average wait time spent by customers obtaining over-dimension/over-weight permits*

**Result Driver:** Dave DeWitt, Deputy Administrative Officer

**Measurement Driver:** Mary Jo Pointer, Motor Carrier Manager

**Purpose of the Measure:**

This measure tracks MoDOT Motor Carrier Services' success in minimizing the time it takes motor carriers to obtain permits that allow them to haul loads that are taller, wider, longer or heavier than those regularly permissible on Missouri highways.

**Measurement and Data Collection:**

Using the WebView database to gather call center data, MCS calculates the average customer wait time on the phone (called "in queue") plus the average length of time speaking to a MCS agent to obtain a permit. In the future, MCS will also collect wait time data from both telephone requests and the Internet-based permit ordering system. Benchmark data is scarce, as other states do not currently track wait time data.

**Improvement Status:**

During the fourth quarter of 2005, MCS received 9,705 calls from OD/OW customers. During October and November, nine agents handled these calls. In December, three agents handled all calls while the others worked on permit requests received through the Internet. There was a slight increase in the average wait time because fewer agents answered calls. The average time the customer waited in queue was 3 minutes, 35 seconds. The average time the caller spent with the agent to complete the transaction was 10 minutes, 7 seconds, resulting in an average of 13 minutes, 42 seconds to obtain an OD/OW permit. MCS staff encouraged customers to apply for permits through the Web site, increasing time spent with customers as they instructed them on entering data and payment information online, while the MCS agent processed the current permit request.

To improve OD/OW permit turnaround time, MCS:

- Provided a new Internet-based system that carriers use to request permits at any time of the day. In December 2005, 73 percent of all single trip permit requests were made through the Web site.
- Adjusted staff hours to ensure all fully complete OD/OW permit requests received by 4:00 p.m. are processed and returned to the customer the same day.

