



# December ATR Monthly Report

Minnesota Department of Transportation  
Office of Transportation Data and Analysis



December 2012



*Your Destination...Our Priority*







## Introduction

The purpose of this report is to examine monthly traffic trends on Minnesota roads. A total of 72 Automatic Traffic Recorder (ATR) sites were used in the analysis for the December 2012 ATR report.

Fluctuation in gas prices and changes in drivers' behavior are major challenges for traffic forecasters, transportation planners, and transportation engineers when projecting future traffic volumes. Four years ago in June 2008, all grades of gas in Minnesota were a lofty \$3.90 per gallon, but by the end of the year prices had plummeted to \$1.65 per gallon. Since the inception of 2009, the cost of gas has trended mostly upward with prices reaching \$2.51 per gallon at the beginning of 2010 and \$3.90 per gallon<sup>1</sup> by May 2011. When predicting the relationship between gas price and fuel consumption in Minnesota, it would be reasonable to assume a negative correlation— as fuel costs rise, fuel use and vehicle travel decrease. However, this has not been the case. Regardless of the price of gas, fuel use and vehicle volume instead tend to fluctuate on a seasonal basis. During summer months both fuel consumption and ATR volume are at their highest during the year (during August and September 2010, Minnesotans pumped more fuel in a two-month span than they had in nearly three years; however, gas prices averaged a robust \$2.75 per gallon<sup>1</sup>). Fall and winter months, on the other hand, tend to exhibit a steady decrease in both fuel use and ATR traffic. When spring hits Minnesota, both variables begin to steadily climb towards their summer peaks.

Data from the FHWA Office of Highway Policy Information shows that annual vehicle miles traveled (VMT) in the U.S. was virtually flat or declining from 2004-2011. According to MnDOT's Office of Transportation Data and Analysis, a similar trend existed in Minnesota over the same eight-year period (*see chart on Page 5*). When looking at Minnesota's ATR volume over the past year, there does not seem to be much deviation from the trend. There are a couple factors that may have helped to limit VMT growth. First of all, the average gas price in Minnesota during 2012 was \$3.57 per gallon<sup>1</sup>, a solid \$2.00 higher than the last time VMT was growing in 2003. Additionally, Minnesota continues to invest in public transportation. From 2004 to 2010, total public transit ridership increased by 38% in Minnesota<sup>2</sup>. If gas prices remain well above \$3.00 per gallon and there exist viable alternatives to using personal vehicles, it may be a while before we see an increase in annual VMT in Minnesota.

<sup>1</sup> U.S. Energy Information Administration

<sup>2</sup> MnDOT Office of Transit





## Acronyms & Definitions

ATR (Automatic Traffic Recorders) are loops in the pavement surface that continuously and automatically collect traffic volume data. There are 72 sites on roads in Minnesota.

AADT (Annual Average Daily Traffic) represents the total traffic count that occurs in one year divided by 365.

VMT (Vehicle Miles Traveled) is commonly used to measure the demand on our transportation network. The VMT is computed by multiplying the AADT by the centerline road miles.

EMPLOYMENT (number of jobs) is defined as civilian workers employed full or part time who receive pay for any part of the pay period that includes the 12<sup>th</sup> day of the month. Excluded are proprietors, self-employed, unpaid family or volunteer workers, farm workers, and domestic workers. Persons working at more than one establishment are counted in each establishment.

## Facts

- The 2011 VMT was **56.7** billion for all roads in Minnesota<sup>1</sup>.
- During December 2012, the average gas price was **\$3.18** per gallon in Minnesota and **\$3.32** per gallon in the U.S.<sup>2</sup>
- The consumption of gas and diesel fuel in Minnesota was **243.1** million gallons for December 2012<sup>3</sup>.

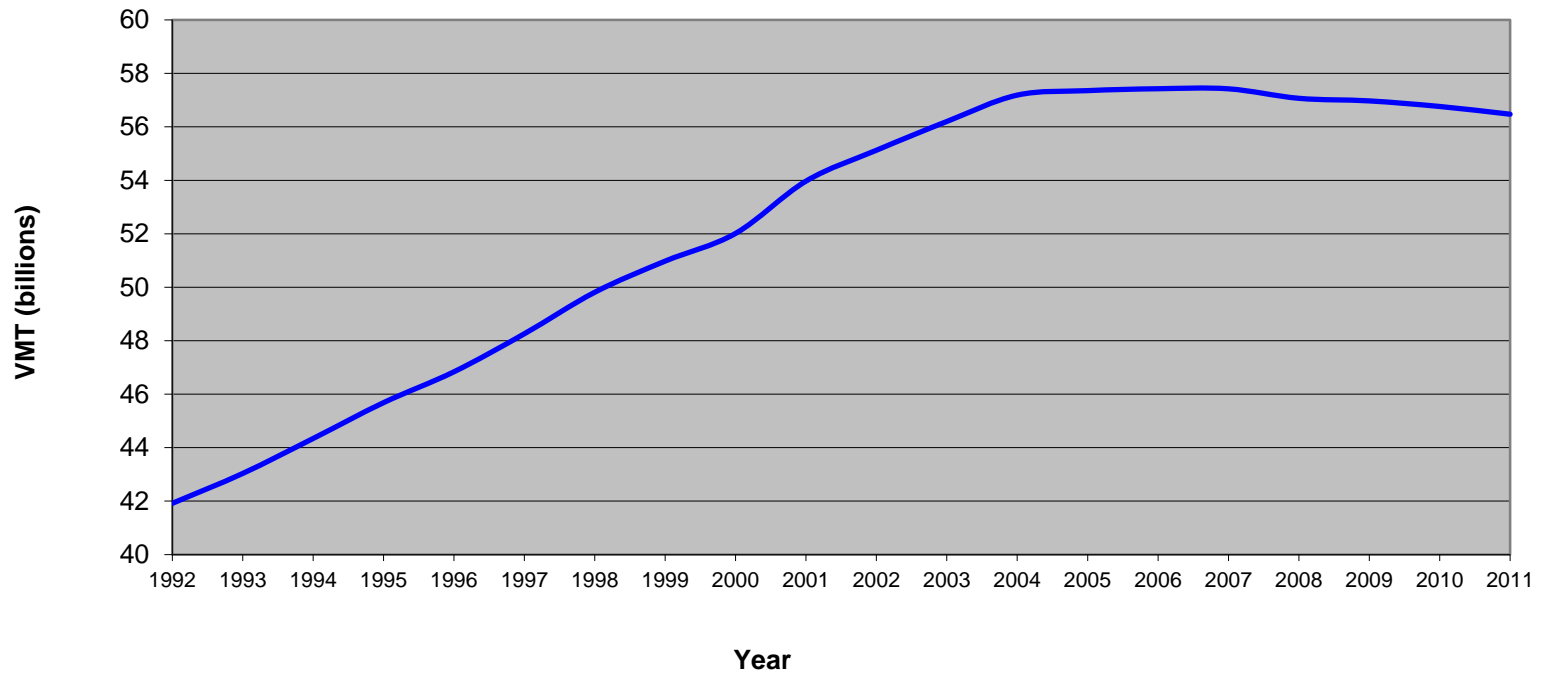
<sup>1</sup> MnDOT, Office of Transportation Data and Analysis, Gene Hicks, 651-366-3856

<sup>2</sup> U.S. Energy Information Administration

<sup>3</sup> Minnesota Department of Revenue



### Minnesota Annual Vehicle Miles Traveled

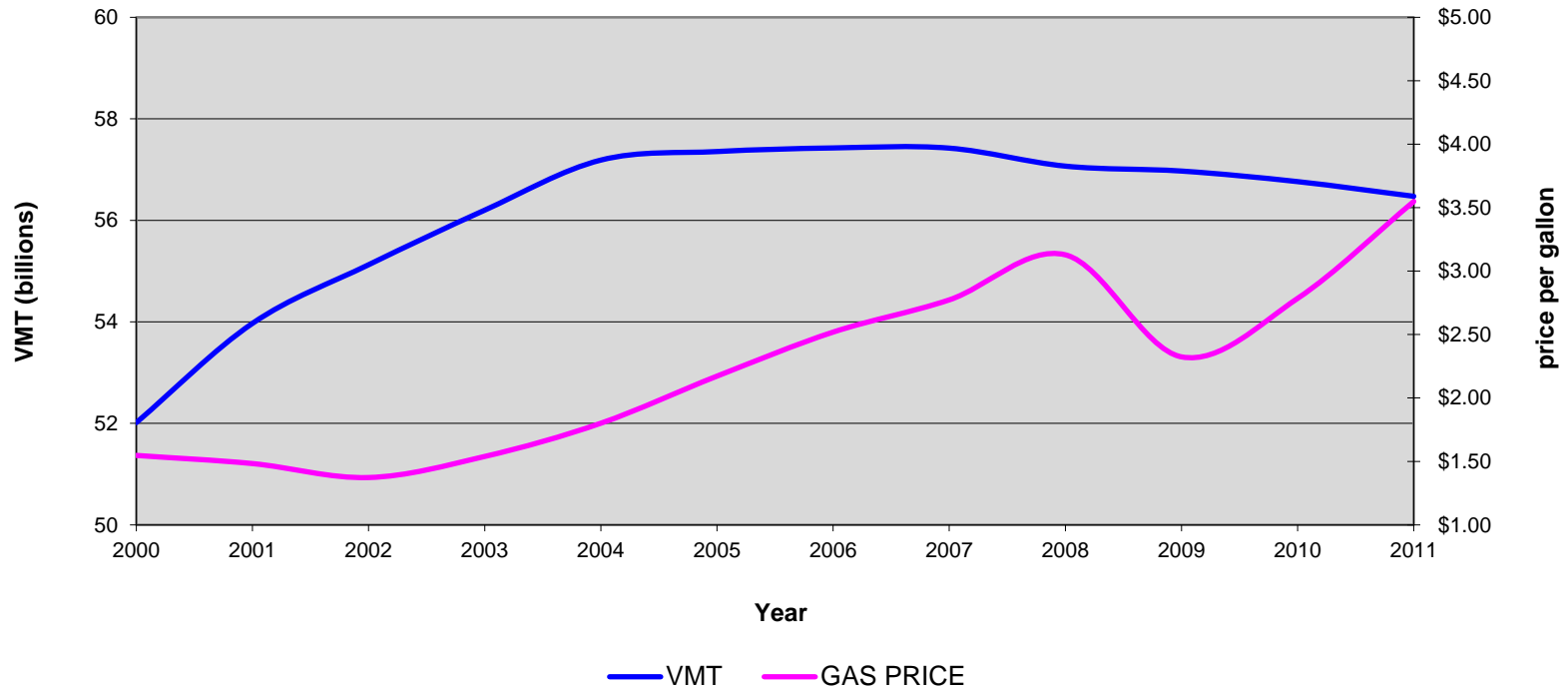


**VMT in Minnesota has been virtually flat or declining since 2004.**

Source: MnDOT, Office of Transportation Data and Analysis, Gene Hicks, 651-366-3856



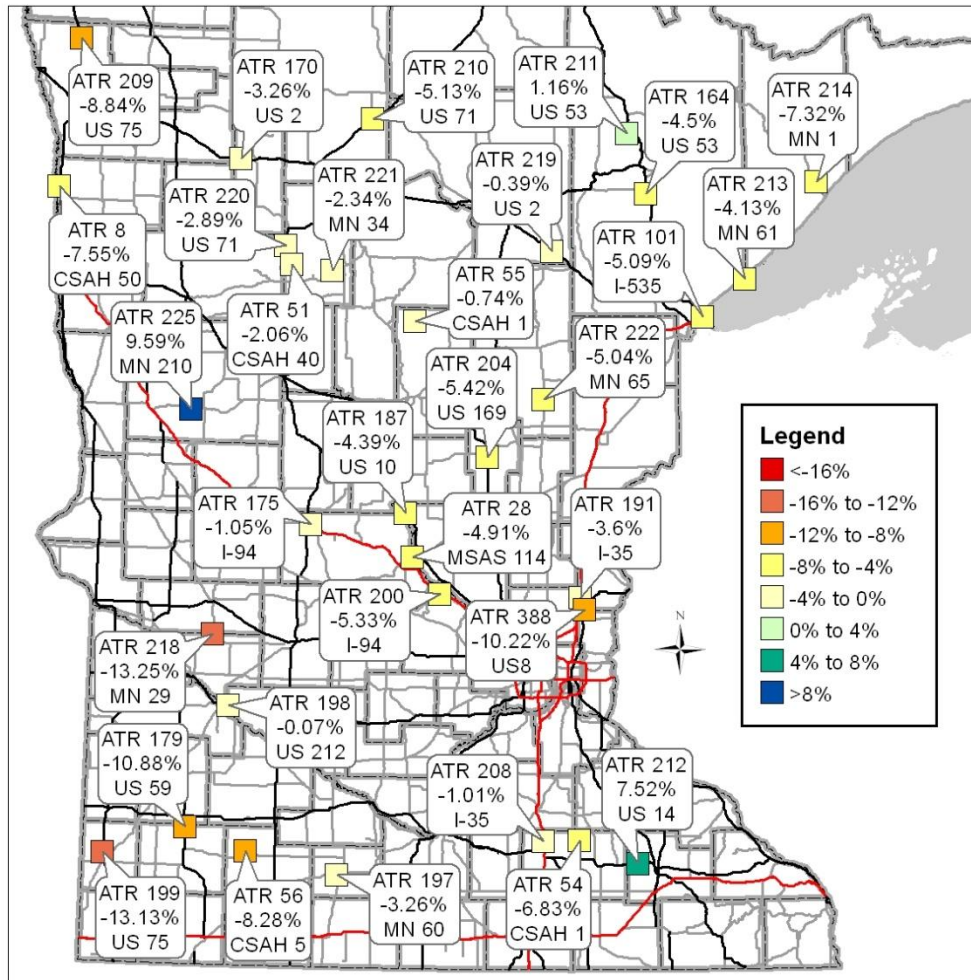
## Gas Price vs. VMT in Minnesota



Sources: MnDOT, Office of Transportation Data and Analysis, Gene Hicks, 651-366-3856; MnDOT, Office of Finance, Budget Section, Greg Colberg, 651-366-4847



# ATR Traffic Change Comparison in Greater Minnesota December 2011 vs. December 2012



The following ATRs are inactive due to nearby construction projects:

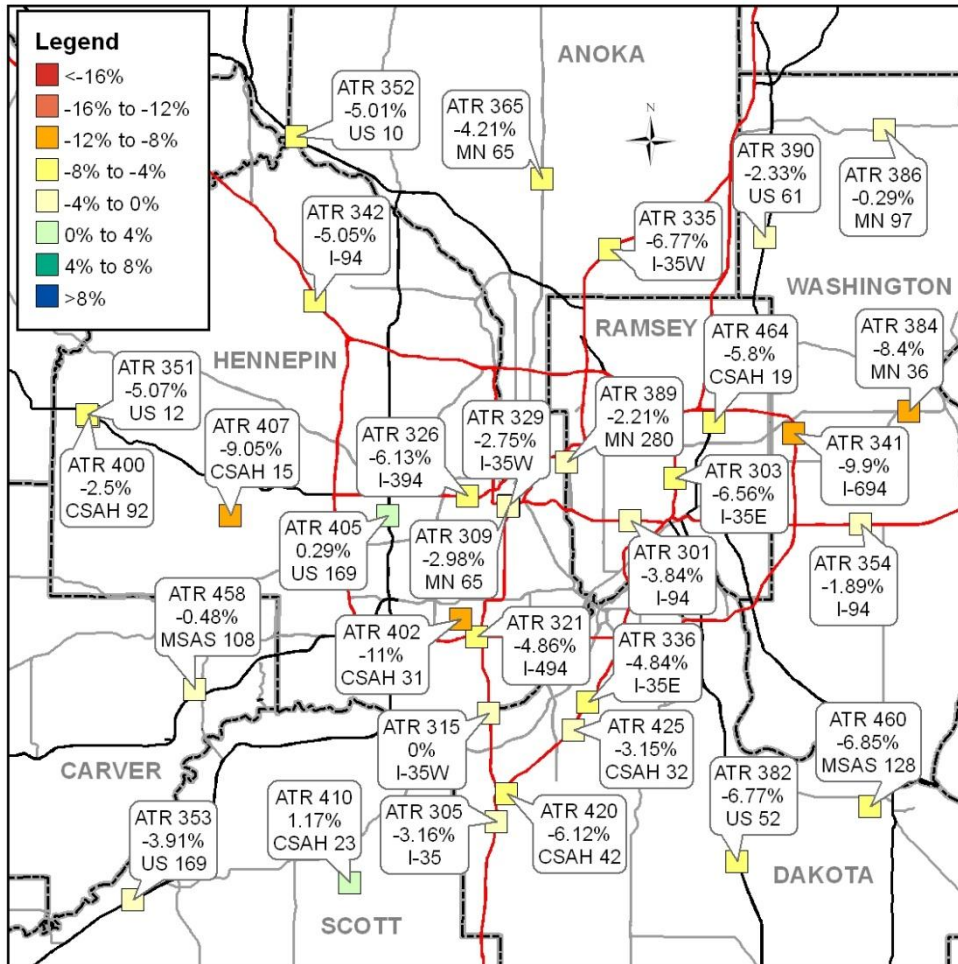
ATR 102 - Construction on I-35

For MnDOT construction information, you can go to:  
<http://www.dot.state.mn.us/construction>





## ATR Traffic Change Comparison in Metro Area December 2011 vs. December 2012



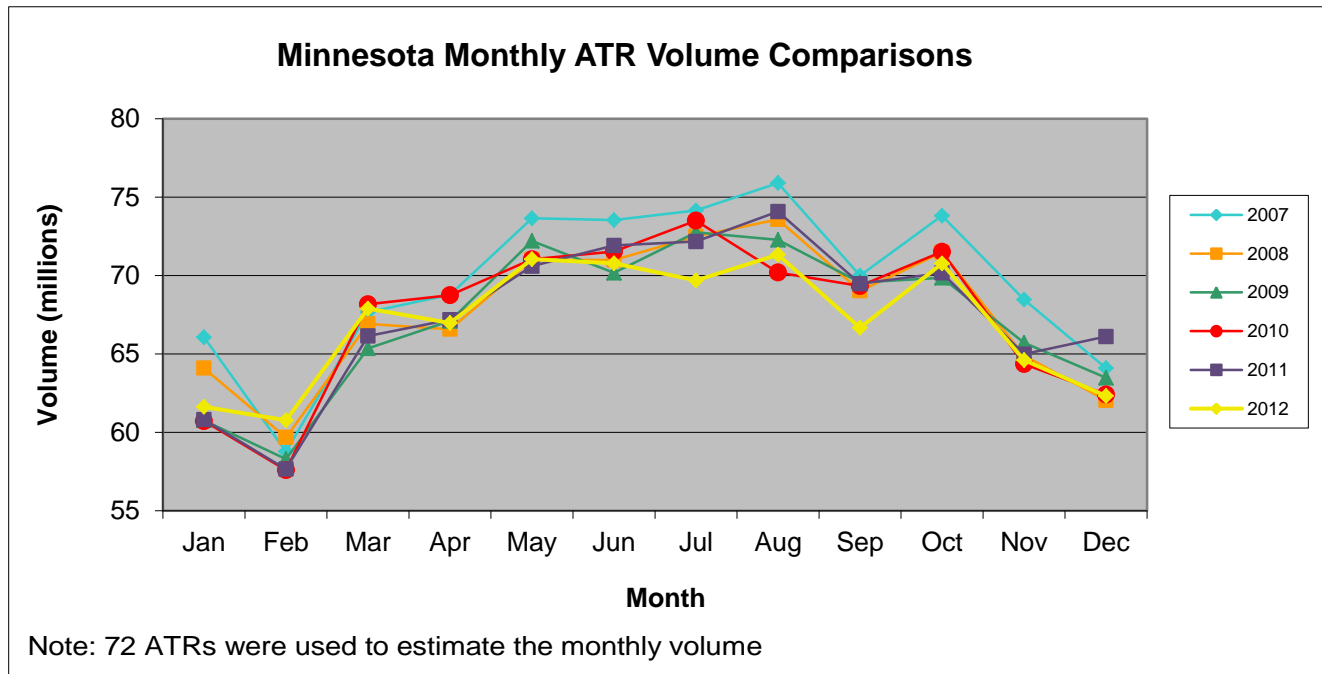
The following ATRs may have been impacted by recent construction projects:

**ATR 384** – Construction on MN 36

For MnDOT construction information, you can go to:  
<http://www.dot.state.mn.us/construction>







**ATR volumes were lower for December 2012 compared to December 2011.**

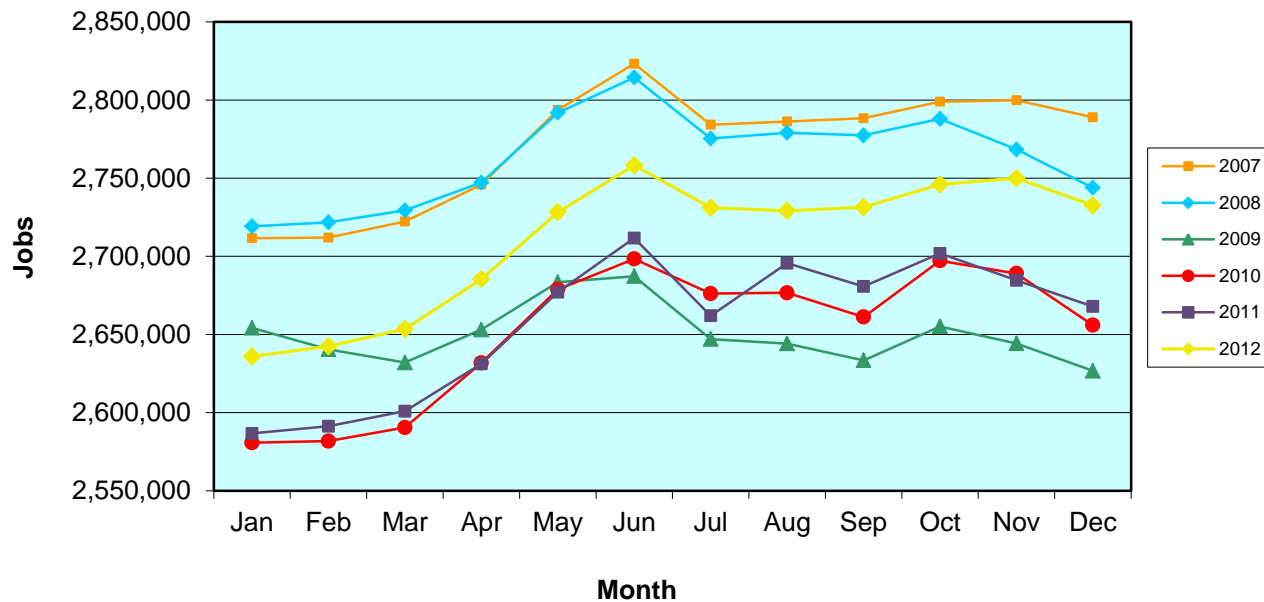
December 2012 vs. December 2011	-5.73% (62.3 million vs. 66.1 million)
December 2011 vs. December 2010	5.92% (66.1 million vs. 62.4 million)
December 2010 vs. December 2009	-1.67% (62.4 million vs. 63.5 million)

Source: MnDOT, Office of Transportation Data and Analysis, Gene Hicks, 651-366-3856





## Minnesota Monthly Non-Farm Employment Comparisons

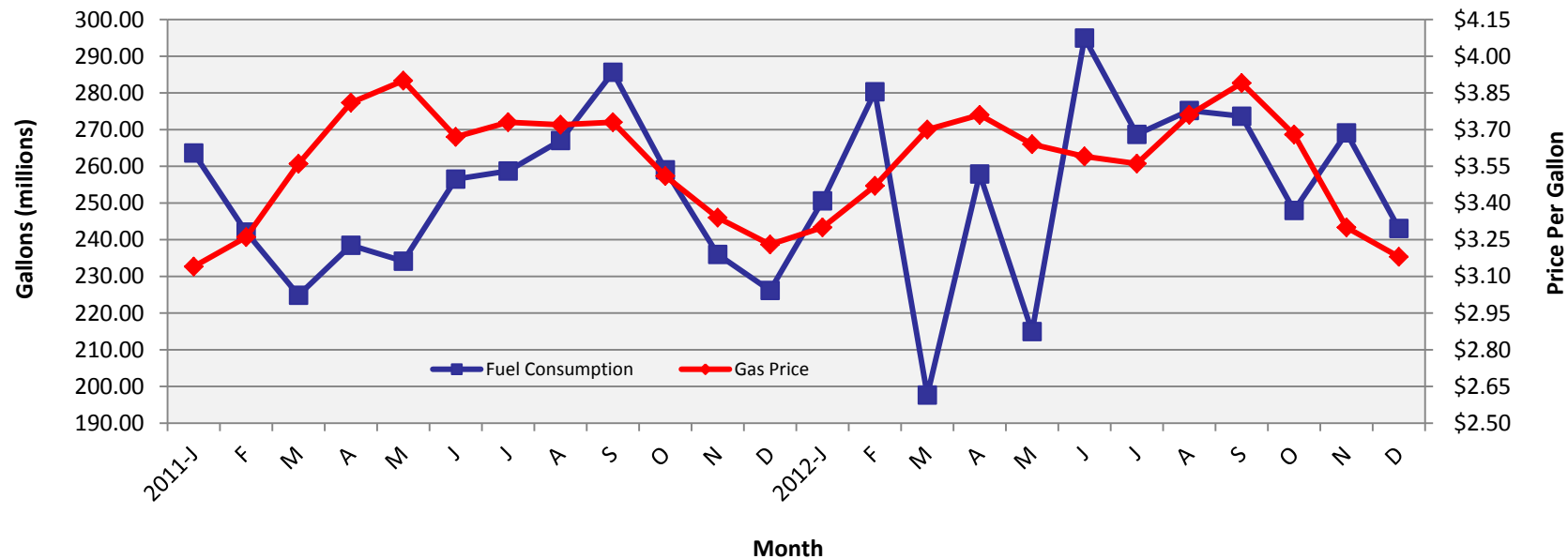


December 2012 vs. December 2011	2.43% (2,732,704 vs. 2,667,931 jobs)
December 2011 vs. December 2010	0.45% (2,667,931 vs. 2,655,967 jobs)
December 2010 vs. December 2009	1.11% (2,655,967 vs. 2,626,690 jobs)

Sources: Minnesota Department of Employment and Economic Development; Labor Market Information, Jerry Brown, 651-259-7382



## Gas Price vs. Fuel Consumption in Minnesota



**Note: Fuel consumption is gas and diesel combined and includes all types of gas (E85, M85, etc.)**

Source: U.S Energy Information Administration

