SITUATIONAL ANALYSIS

An Analysis of Transportation Funding
in the State of Florida

WORKING DRAFT

Metropolitan Planning Organization Advisory Council

Revenue Study Advisory Council

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The Metropolitan Planning Organization Advisory Council (MPOAC) has asked the Center for Urban Transportation Research (CUTR) to research transportation funding options for Florida.

The first phase required assembly of a Revenue Study Advisory Committee (RSAC). All members of the RSAC are currently involved in Florida's transportation community and are well versed in issues surrounding the funding situation.

Following creation of the RSAC, CUTR attempted to describe the current situation and pull together relevant information into a single document to establish the foundation for the discussion of the future of revenue for transportation in Florida.

The organizations invited to participate were:

Florida Airports Council
Florida Association of Counties
Florida Chamber of Commerce
Florida Chapter, American Public Works Association
Florida League of Cities
Florida Public Transportation Association
Florida Seaports Council
Florida Transportation Builders' Association
Florida Transportation Commission
Florida Trucking Association
Floridians for Better Transportation
MPOAC Governing Board
MPOAC Staff Directors' Advisory Committee
The Nature Conservancy in Florida

Introduction

Planners and providers of transportation infrastructure and services have generally seen an erosion of transportation revenue and its "buying power" over at least the last decade. Stagnant or declining traditional funding sources, increases in construction and fuel costs, and the current recession are all among the factors placing increasing pressure on transportation providers. These dynamics when coupled with the lack of political willingness to adjust traditional fuel taxes and fees are causing reductions in capital investments and in some metropolitan areas roll backs in public transportation services.

Most urban and interregional highway corridors are expected to be heavily congested during peak periods by 2025, even after planned improvements are made. Many of the state's airports are projected to be operating at more than 80 percent of capacity, the point at which expanded capacity should be under construction. Florida's seaports must improve waterside, terminal, and landside infrastructure to handle expected rapid growth in freight and cruise passenger activity. Additionally, significantly more capacity is needed in rail and urban transit systems to provide viable options for moving people and freight within and between urban areas.

In recent years, the economic recession has taken a toll on revenues accruing to the State Transportation Trust Fund. These revenue reductions coupled with legislative actions to divert transportation revenues to non-transportation purposes have resulted in significant reductions to project commitments in the FDOT 5-year work program (approximately $10 billion since 2006). Additionally, a significant share (approximately 33%) of Florida's transportation revenues is automatically adjusted for inflation. However, most transportation revenue sources (such as federal fuel taxes, local option fuel taxes, motor vehicle license taxes/fees, and the documentary tax) are set at rates established in law, and therefore, lose buying power annually. While inflation results in increases in certain FDOT revenues, it also causes costs to rise. If the costs of FDOT's programs rise proportionately to the rate of inflation, then FDOT will be losing ground, since not all revenues are responsive to inflation. The combination of these issues disrupts the stability of the 5-year work program and hinders the ability to address significant transportation backlog and meet future transportation needs.

Current revenue sources are not sufficient to fund long-term transportation needs. Potential uncertainties in the long-term could dramatically alter transportation revenues

and, thus, require structural changes in Florida's overall revenue approach. These uncertainties include the impact of:

- A growing market for more fuel efficient cars (hybrids, compressed natural gas, electric, gasohol, etc.)
- Significant price increases for fuel
- The current lack of certainty of the federal role in transportation funding
- Public reluctance to accept additional user fees
- National emphasis on alternative fuels and technologies
- Telecommuting
- Shifts in demographics that will impact revenues and the demand for transportation services
- Changing public attitudes towards environmental sustainability

The policy issue that needs to be addressed in the long-term is the need to evaluate Florida's future transportation revenue collection system and whether the basis for this system should be supplemented or fundamentally changed. This paper is intended to describe the current situation and be the basis for the deliberations for the MPOAC and the MPOAC Revenue Study Advisory Committee.

The following section outlines some of the national issues that are affecting Florida's ability to fund transportation from traditional revenue sources.

National Funding Issues

Federal Funding for Transportation

Federal funding for transportation is derived from highway excise taxes on motor fuel and truck-related taxes on truck tires, sales of trucks and trailers, and heavy vehicle use. Tax revenues are deposited into either the Highway Account or the Mass Transit Account of the Federal Highway Trust Fund (HTF) and then distributed to the states. The Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) then distribute funds from the Highway and the Mass Transit Account, respectively, to each state through a system of formula grants and discretionary allocations. Revenues from the tax on highway fuels represent 90 percent of the receipts that accrue to the HTF. Table 1 provides further detail on tax rates and the account distribution of these tax revenues.

Table 1 Overview of Federal Highway User Fees

User Fee	*Tax Rate (Cents per Gallon)*	*Distribution of Tax (Cents per Gallon)*			
		Highway Account Fund	*Mass Transit Fund*	*Underground Storage Tanks TF*	*General Fund*
Gasoline	18.4	15.44	2.86	0.1	–
Diesel & Kerosene Fuel	24.4	21.44	2.86	0.1	–
Liquefied Petroleum Gas	18.3	16.17	2.13	–	–
Liquefied Natural Gas	24.3	22.44	1.86	–	–
Other Special Fuels	18.4	15.44	2.86	0.1	–
Compressed Natural Gas	18.3	15.43	2.86	–	–

Tires: (Proceeds to Highway Account)
Tax is imposed on tires sold by manufacturers, producers, or importers at the rate of $.0945 ($.04725 in the case of a bias ply or super single tire) for each 10 pounds of the maximum rated load capacity over 3,500 pounds.

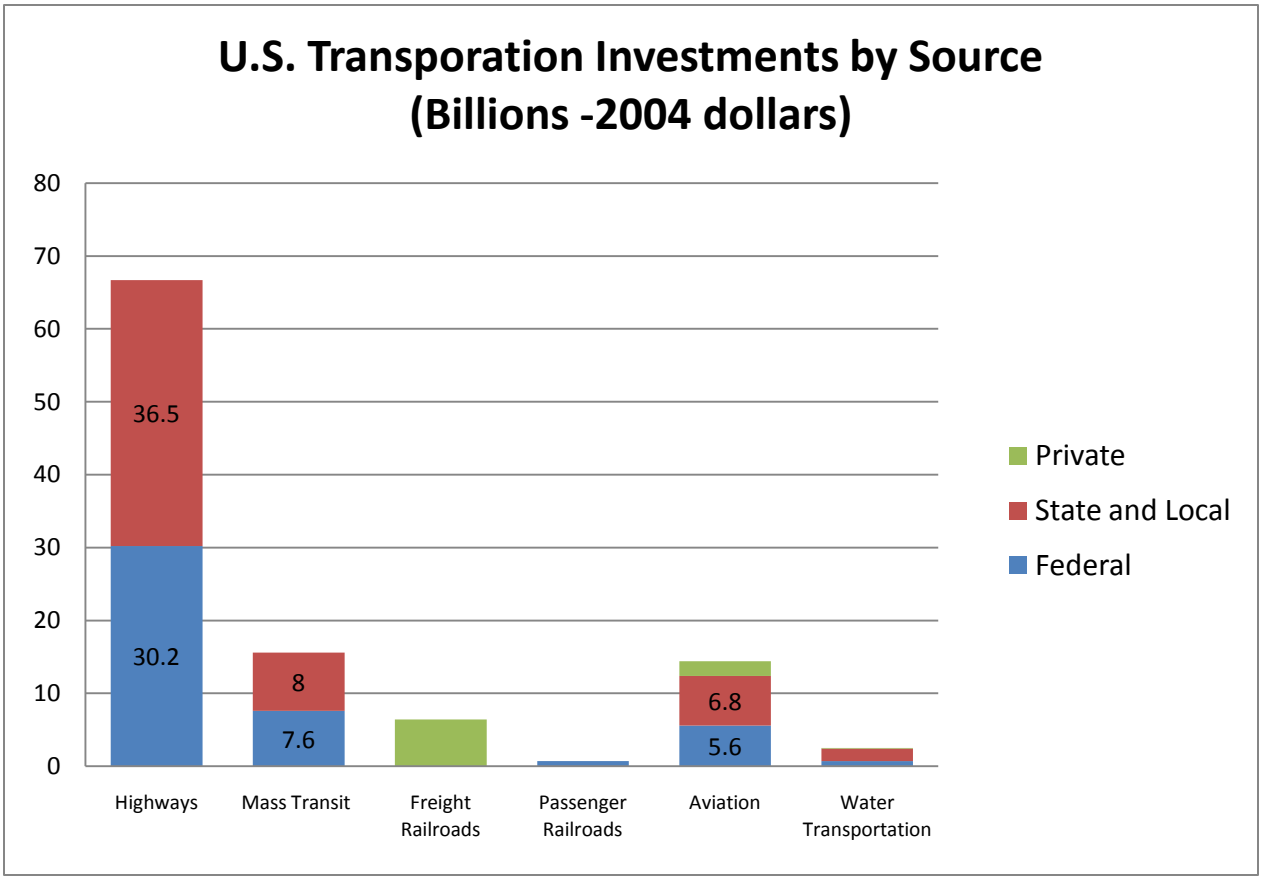
Truck and Trailer Sales: (Proceeds to Highway Account)
12 percent of retailer's sales price for tractors and trucks over 33,000 pounds gross vehicle weight (GVW) and trailers over 26,000 pounds GVW. The tax applies to parts and accessories sold in connection with the vehicle sale.

Heavy Vehicle Use: (Proceeds to Highway Account)
Annual tax: Trucks 55,000-75,000 pounds GVW, $100 plus $22 for each 1,000 pounds (or fraction thereof) in excess of 55,000 pounds Trucks over 75,000 pounds; GVW, $550.

Source: FHWA Office of Highway Policy Information, Highway Statistics 2007, Table FE -21B, June 2009

The federal role in the nation's transportation infrastructure is very significant. According to the Congressional Budget Office, federal investment in transportation infrastructure (measured in constant dollars) peaked in 2003 and has declined or remained level year to year since then. Federal funding for the nation's highways represents 45 percent of all investment and is 49 percent for mass transit (Figure 1).

The significance of these federal funding ratios becomes more apparent as the health of the HTF is examined. The federal surface transportation programs are funded through multi-year authorizations that are subject to annual limitations through obligational limitations (in the case of highway programs) and appropriations even though the multi-year legislation establishes annual funding levels. The current situation at the federal level is critical from two perspectives. At the time of this writing, the HTF balance has been in a precipitous decline that has required federal general fund

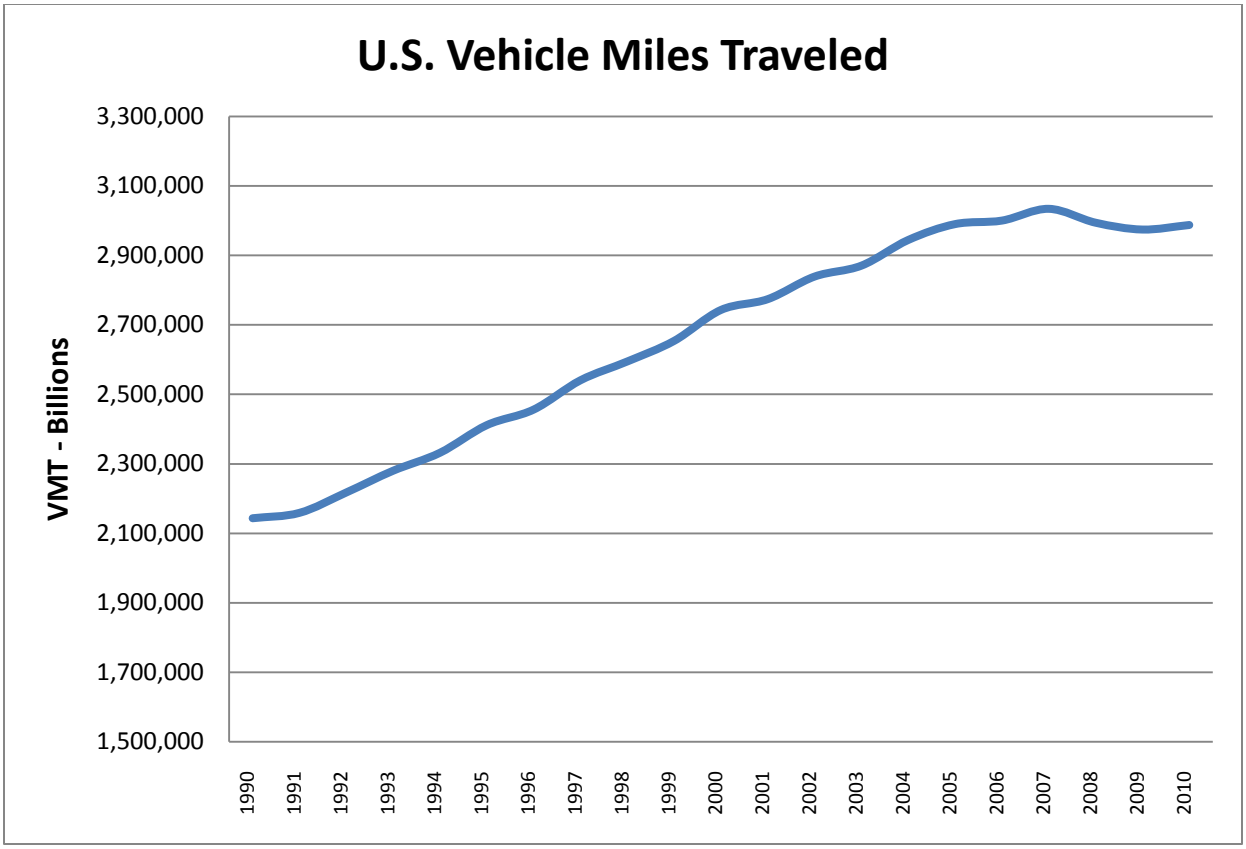


Source: Congressional Budget Office, "Issues and Options in Infrastructure Investment," May 2008

Figure 1 U.S. Transportation Investment by Sector

infusions to ensure its solvency($8.017 billion in September 2008- pursuant to Public Law110-318 and $7 billion in August of 2010- pursuant to Public Law 111-46). In addition, due to various political factors, the current surface transportation authorization expired in at the end of federal fiscal year 2009. The act, Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users'' or ``SAFETEA-LU'' authorized an annual average of $38.6 billion for highway and transit programs nationally.

The declining balances in the HTF and ensuing need to transfer general funds is a result of a decline in vehicle miles traveled (VMT) and an increasingly more efficient light duty vehicle fleet. As stated earlier, since the vast majority of federal transportation revenues are highway motor fuel taxes, the economic recession and fuel efficiency have had a compounding impact on the HTF. Figure 2 graphs the trend of vehicle miles of travel in the U.S. for the last two decades. The decline that began in 2007 is coincidental with both the weakening economy and the spike in fuel prices that both occurred around that period. While fuel prices dropped back to pre- 2008 levels, the impact of the recession is still being seen as 2010 levels of travel are still below those experienced in 2005.



Source: U.S. Department of Transportation, Federal Highway Administration, Traffic Trends

Figure 2 U.S. Highway Vehicle Miles Traveled 1990 to 2010

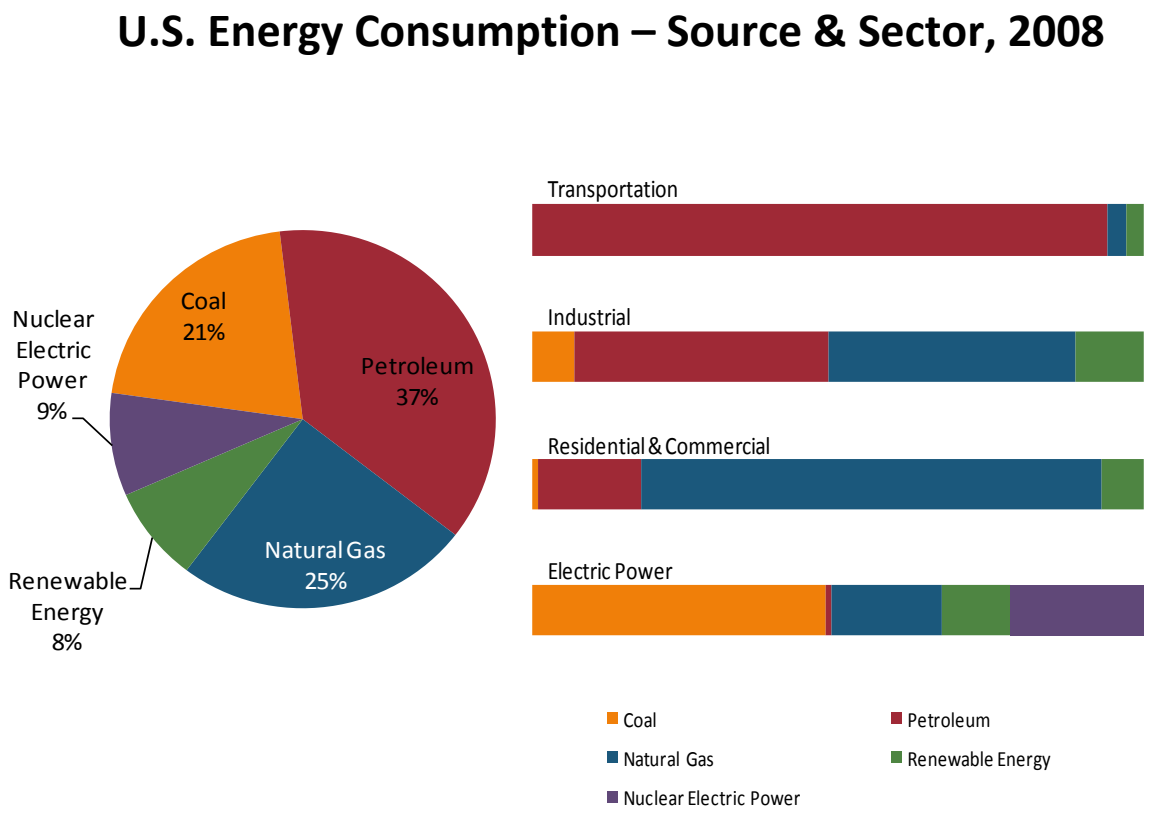
Fuel Efficiency

Concerns over the emissions related to the burning of fossil fuels and their impact on the generation of Green House Gases (GHG) along with concerns over U.S. energy security have led to recent efforts to increase the efficiency of the transportation fleet. Again, given the reliance on fuel taxes as the major federal transportation revenue source, the issue has financing implications.

In 2008, the transportation sector in the U.S. consumed 28 percent of all of the energy used nationally. Of that use, 84 percent of the energy to move passengers and goods was in the form of gasoline and diesel with the remainder comprising aviation jet fuel, natural gas, and other alternative fuels. The portion of U.S. petroleum consumption used by transportation had been growing over time as electric utilities and the industrial sector have shifted from petroleum to other sources. These sources continue to overwhelmingly come from fossil fuels, but the transportation sector is by far the

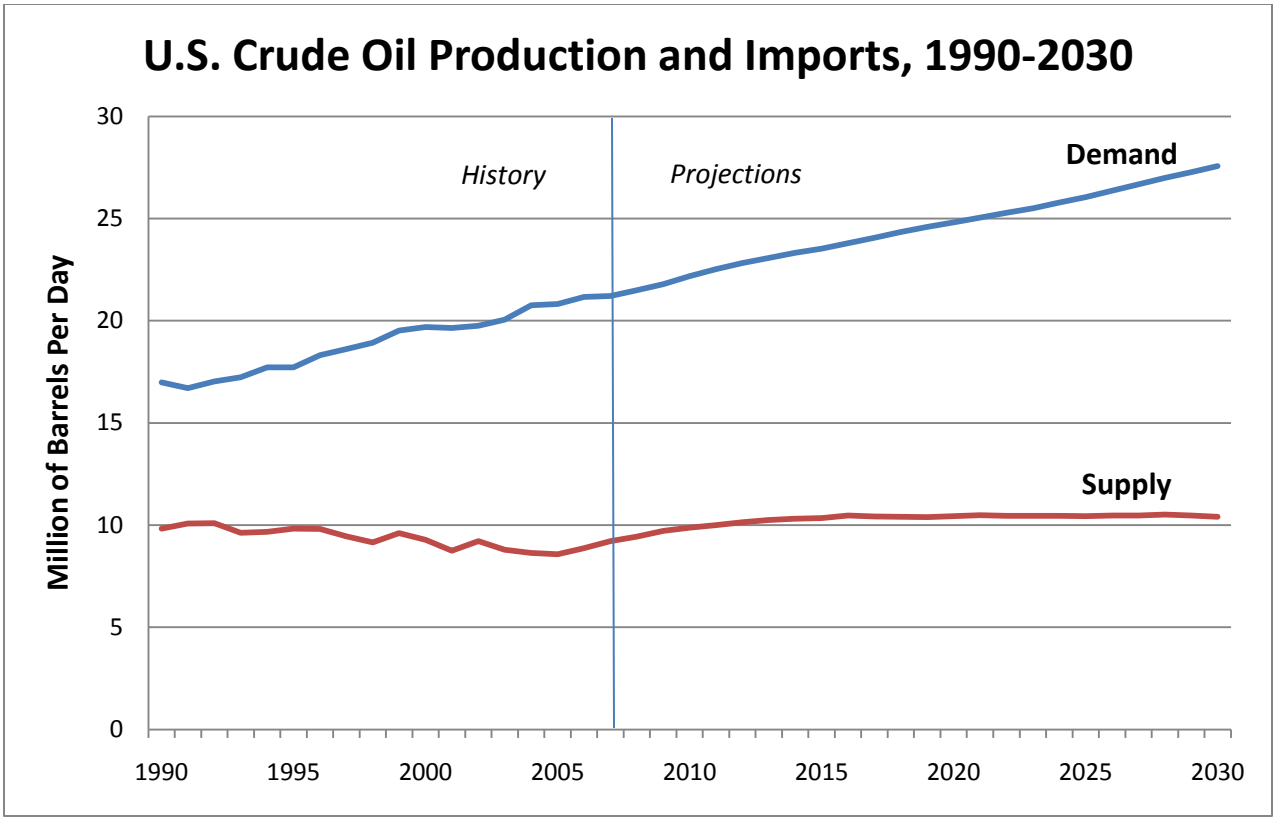
leader in the consumption of petroleum. Figure 3 illustrates energy use by sector and highlights the extent to which transportation is reliant on petroleum based fuels.

This reliance on petroleum has risks for supply disruptions as well as significant price swings. Disruptions to the U.S. transportation system were realized twice in the 1970's because of supply disruptions and the price spikes of the late summer of 2008 exemplify these risks. Figure 4 illustrates the extent to which U.S. demand for petroleum has, and is expected to, outpaced domestic production.



Source: Energy Information Administration, Annual Review 2007

Figure 3 U.S. Energy Consumption Source and Sector, 2008

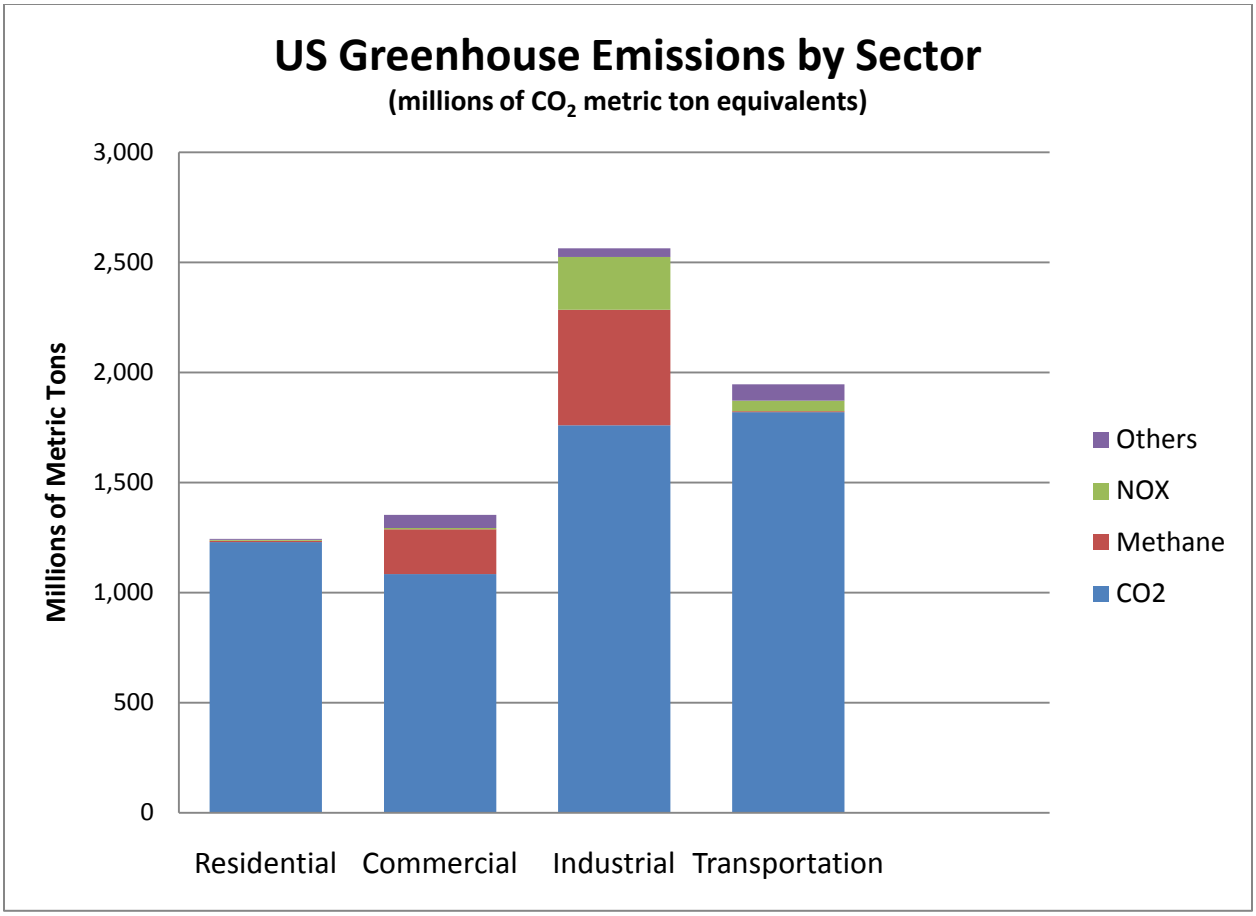


Source: EIA, 2008 Annual Energy Outlook

Figure 4 U.S. Crude Oil Production and Imports, 1990-2030

The reliance on a petroleum-based surface transportation system has raised concerns from an energy security standpoint and an environmental one. As the demands for mobility have grown without commensurate innovations in energy technologies, the transportation sector now finds itself the major consumer of petroleum and a significant contributor to CO_2 emissions. The transportation sector generates about one-third of the nation's green house gas emissions (Figure 5). Given that transportation contributes more CO_2 to the atmosphere than other U.S. economic sectors and is second only to the industrial sector in total GHG emissions, reduction in petroleum consumption levels are becoming more of a national priority.

Fuel efficiency standards were established over 30 years ago in the wake of the petroleum crises of the 1970's. Corporate Average Fuel Efficiency (CAFE) standards were introduced in 1975 and have remained relatively unchanged for the last 25 years.



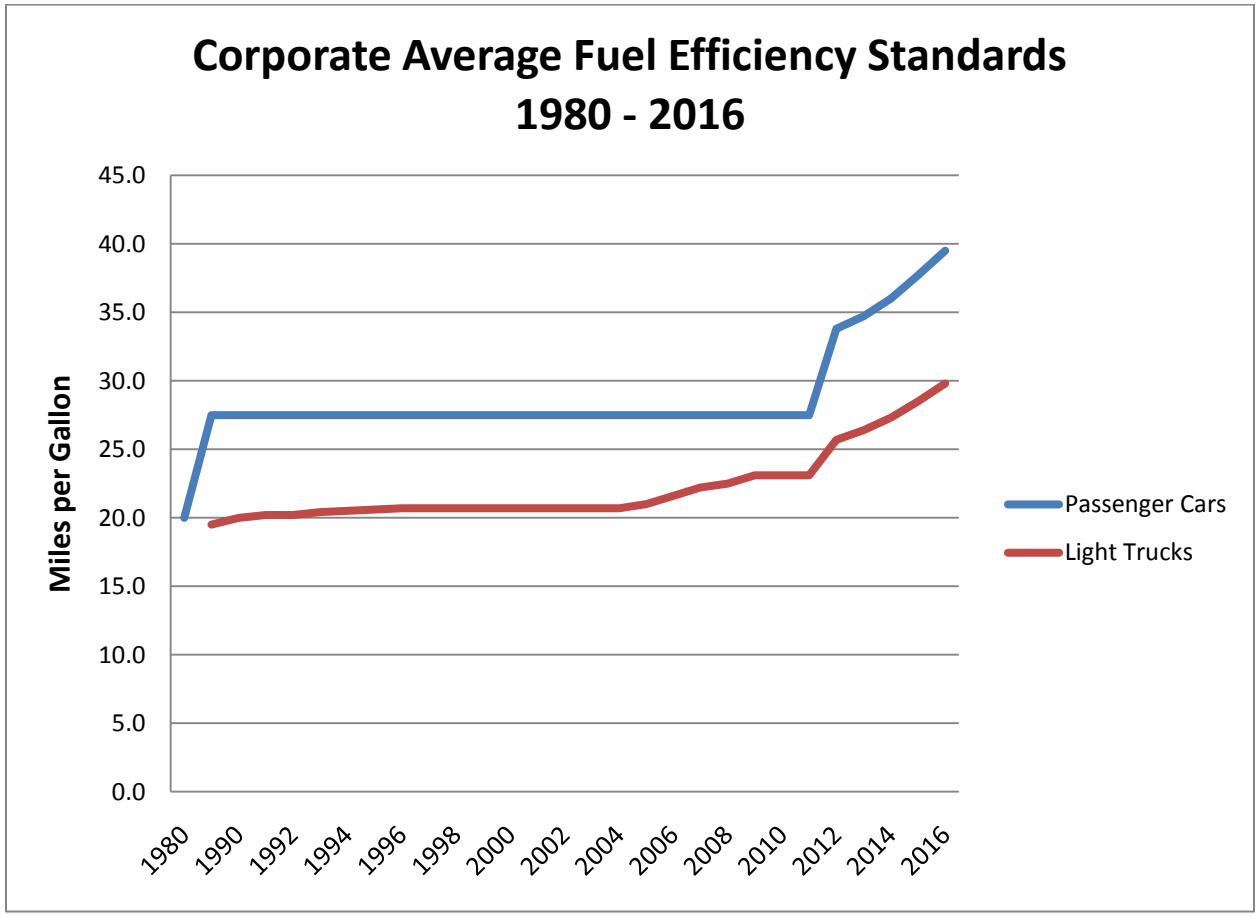
Source: U.S. Department of Energy, Transportation Energy Data Book, July 2010

Figure 5 U.S. Greenhouse Emissions by Sector

The standard for passenger cars has remained at 27.5 miles per gallon (mpg) since 1985 and for light trucks it has risen modestly from 19.5 mpg to 23.1 mpg for the same period. In 2010 both the Environmental Protection Agency (EPA) and the Department of Transportation through the National Highway Transportation Safety Administration (NHTSA) published final rules affecting the light duty vehicle and medium duty passenger vehicle (passenger vehicles from 8,500 to 10,000 pounds Gross Vehicle Weight Rating) fleet efficiency. The EPA under its authority has published GHG standards for autos and light trucks, and NHTSA has issued complimentary new Corporate Average Fuel Economy (CAFE) standards.

Expressed in grams per mile, the new standards for GHGs will differ by a vehicle's size or "footprint" and are to be in place for the model year 2012 vehicle production run. The new GHG standards average a CO_2 emission rate of 250 grams per mile by model year 2016 with an estimated mpg equivalent of 35.5 for the combination of light duty trucks and passenger autos. Rules that would apply to 2017 and beyond are currently

being formulated and will include a similar approach for heavy-duty vehicles, likely impacting urban transit fleets. Although in the early stages, comments are now being sought as input to the rules proposal. Figure 6 shows the dramatic change that will occur as these new standards are put in place further effecting fuel tax collection rates.

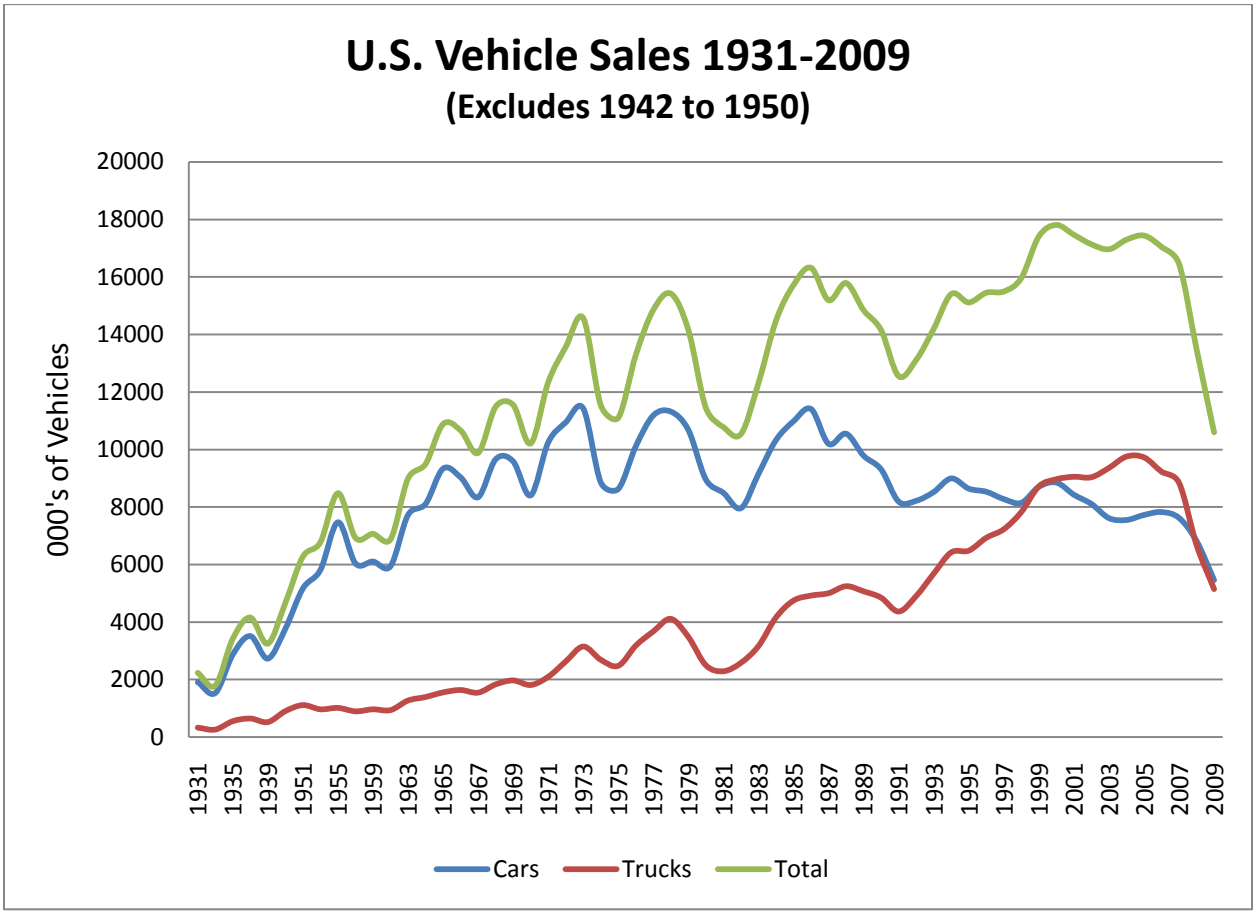


Source: U.S, Department of Energy, Energy Data Book

Figure 6 Corporate Average Fuel Efficiency Standards – Light Duty Vehicles – 1980 to 2016

The actual fuel efficiency of the fleet has historically been from three to five miles per gallon lower than the CAFE standards due to actual field conditions, vehicle maintenance issues and the time that it takes for vehicle replacement to occur in the fleet. The current recession has had an obvious impact on new light-duty vehicle sales and the average age of the U.S. light-duty fleet has increased from 8.4 years in 1995 to 10.2 years in 2009 according to the U.S. Department of Energy's Transportation Energy Book from July 2010. Some of this increase can be attributed to increased useful life because of technological advances and because of more multi-vehicle households review of sales trends shown in Figure 7 could indicate that as the economy recovers the vehicle replacement rate will increase with the new, more efficient automobiles and

light trucks. This could accelerate the vehicle efficiency impacts on motor fuel tax revenues.



Source: Ward's Automotive 2009

Figure 7 U.S. Vehicle Sales – 1931 to 2009

Emerging technologies such as the plug-in hybrid electric vehicle, the all electric vehicle and alternatively fueled vehicles are all expected to contribute positively to the environmental and energy security concerns of the nation but will also continue to erode the motor fuel tax as it is currently administered as a viable long-term major funding mechanism. The situation presented here must also be coupled with the fact that the current fuel tax at the federal level is not adjusted for inflation and has not been adjusted since October, 1993.

Like the State Transportation Trust Fund (STTF) the HTF has had its share of "raids." Portions of both the federal gasoline and diesel taxes were diverted to reduce the general fund deficient in 1990, 1993, 1995 and 1996.

Overview of State Funding Sources for Transportation

Florida's transportation funding sources levied at the statewide level include a combination of fuel taxes and motor vehicle-related taxes and fees. With the exception of proceeds from these taxes and fees that are diverted by law to other uses, revenues generated from these sources are deposited into the State Transportation Trust Fund and used by the Florida Department of Transportation (FDOT) for transportation purposes.

Highway fuel taxes have been a source of transportation funding since 1921. These taxes have been periodically increased over the years and were significantly restructured in 1983. In 1990, the Governor and Legislature enacted the largest funding increase in the history of the Florida Department of Transportation which included the creation of the Florida Intrastate Highway System, an increased emphasis on multimodal planning, and a significant expansion of Florida's Turnpike System. With the exception of the elimination of general revenue service charges which previously diverted transportation revenues to other needs of the state in 2000 and 2001, the current funding framework has remained largely unchanged since 1990.

The following is a description of major taxes and fees currently authorized by Florida Constitution and state law:

State Tax Sources for State Use

State Fuel Sales Tax - the State Fuel Sales Tax is levied on highway fuels (not including alternative fuels) and non-highway diesel fuels (levied on intrastate railroads, commercial vessels, construction equipment, etc.). The highway fuel sales tax is currently 12 cents per gallon and is adjusted annually with fluctuations in the Consumer Price Index. The non-highway fuel sales tax is currently set at 6 percent of the fuel's retail sales price, or at the highway fuel sales tax rate of 12 cents per gallon.

State Comprehensive Enhanced Transportation System (SCETS) Tax - the SCETS Tax rate in each county is equal to two-thirds of the total local option fuel taxes up to four cents per gallon. For example, in counties where six cents of Local Option Gas Tax is levied, the SCETS Tax will equal four cents (i.e., 2/3 x 6 = 4). While the proceeds of the SCETS Tax are not shared directly with local governments, they must be spent in the respective FDOT District, and to the extent feasible, in the county in which they were

collected. Like the fuel sales tax, the tax is adjusted with fluctuations in the Consumer Price Index. Currently, the SCETS Tax rate is 6.6 cents.

Aviation Fuel Tax - Florida imposes 6.9 cents per gallon tax on aviation fuel. This fuel is used in aircraft, and also includes aviation gasoline and aviation turbine fuels and kerosene. The revenues generated from this tax are limited to aviation projects only. The funds are deposited into the Fuel Tax Collection Trust Fund, and then distributed to the State Transportation Trust Fund.

Fuel Use Tax and Fee - the Fuel Use Tax is imposed by every state in the nation (via the International Fuel Tax Agreement) on heavy vehicles engaged in interstate operations. The tax is based on fuel consumed rather than fuel purchased in a state. The tax is comprised of an annual decal fee of $4.00 plus a use tax based on the number of gallons consumed times the prevailing statewide fuel tax rate.

Motor Vehicle License Tax - the Motor Vehicle License Tax is an annual tax for operating motor vehicles, mopeds, motorized bicycles, and mobile homes. These taxes vary according to weight and type of each vehicle. Pursuant to Article XII, Sec. 9 (d)(3) of the Florida Constitution, the first proceeds of the tax are deposited to the Public Education Capital Outlay Trust Fund and, as directed by s. 320.08 F.S., the remaining revenues are deposited into the State Transportation Trust Fund and the General Revenue Fund.

Initial Registration Fee - a one-time fee of $225 is charged for first-time registration of newly purchased vehicles. Of the proceeds of this fee, 44.5 percent are deposited to the State Transportation Trust Fund and the remaining 55.5 percent are deposited to the General Revenue Fund.

Title Fee - a fee is charged to all motor vehicles when issuing a certificate of title. The fee ranges from $49 to $70 depending on the type of title transaction. The proceeds of this fee are deposited into the State Transportation Trust Fund or the state's General Revenue Fund as provided by statute.

Rental Car Surcharge - a $2.00 per day surcharge is assessed on the first 30 days of car leases or rentals. Eighty percent of these proceeds are deposited into the State Transportation Fund, 15.75 percent are deposited to the Tourism Promotional Trust Fund, and 4.25 percent are deposited to the International Trade and Promotion Trust Fund.

State Documentary Stamp Tax- the 2005 legislature enacted growth management legislation to address needed infrastructure in Florida. This legislation broadened the distribution of revenues from the documentary stamp tax on documents such as deeds, stocks and bonds, mortgages, etc. The State Transportation Trust Fund receives a percentage of the collections from this tax, not to exceed $541.75 million annually. According to the Department of Transportation, the November 2009 Revenue Estimating Conference estimated $56.80 million in distributions from the Documentary Stamp Tax to the State Transportation Trust Fund and $77.85 million for fiscal year 2010-2011.

State Tax Sources for Local Use

The following motor fuel taxes are distributed to local governments:

Constitutional Fuel Tax – set at two-cents per gallon, this tax is distributed to counties based on a constitutional formula. The county distribution factor is calculated using population, area, and total tax collections. The priority for the proceeds of the Constitutional Gas Tax is to meet the debt service requirements, if any, on local bond issues. Any remaining resources are credited to the counties' transportation trust fund.

County Fuel Tax – set at one-cent per gallon, this tax is distributed by the same formula as the Constitutional Gas Tax. Counties may use the revenues from this tax for transportation-related expenses.

Municipal Fuel Tax – set at one-cent per gallon, revenues from this tax are transferred into the Revenue Sharing Trust Fund for Municipalities where they are joined with other non-transportation revenues. These revenues may be may be used for transportation-related expenditures within incorporated areas and are distributed to municipalities by statutory criteria.

Local Tax Sources

State law authorizes local governments to enact the following local option taxes for transportation purposes:

Ninth-cent Fuel Tax - originally called the "9th Cent" tax when the state's fuel taxes totaled 8 cents, this tax may be levied in any county by an extraordinary vote (majority plus one) of its Board of County Commissioners. The tax proceeds can be shared with cities within the county by agreement. 51 counties currently levy this tax.

Charter County and Regional Transportation System Surtax - this tax can be levied in all 20 charter counties and a county that is consolidated with one or more municipalities. The tax can be levied at a rate of up to one percent of taxable transactions up to $5,000 (excludes fuel sales taxes) by countywide referendum. Permitted uses of the revenues include financing the development, construction, and operation of fixed guideway, rapid transit systems, bus systems, on-demand transportation services, roads and bridges, and pledges to bonds issued for these purposes. The surtax is currently levied in only Duval and Miami-Dade Counties.

Local Option Fuel Tax - counties are authorized to levy a fuel tax of up to 11 cents per gallon of gasoline (but not diesel, which is standard in every county at 6 cents per gallon). The tax proceeds must be shared with municipalities.

Other Funds

Local Expressway Authorities

Except for Florida's Turnpike Enterprise, most of Florida's toll agencies are established within Florida Statute Chapter 348 Expressway and Bridge Authorities, Parts I through X. Part I, entitled the "Florida Expressway Act and Related Provisions," details the power for any county or counties to establish an expressway authority. It establishes the method for a county or number of contiguous counties to create an expressway authority. Part I also specifies the board composition, terms of board members, powers, and financing capabilities. It precludes the creation of an expressway authority under Part I in a county where an authority has been created under Parts II through IX (Brevard, Broward, Hillsborough, Orange, Pasco, St. Lucie, Seminole, and Santa Rosa Counties) or in a county with an authority created under Chapter 349 (Duvall County).

One significant difference between Part I authorities and the others is the explicit permission to construct operate and maintain not only expressways, but also a "public transportation facility."

The remaining Chapter 348 authority is the Southwest Florida Expressway Authority (SWFEA) created in 2005 under Part X. SWFEA's statute is unique in that it was created with a single project in mind: tolled express lanes on Interstate 75 in Collier and Lee Counties with provisions for an extension into Charlotte County.

The three toll authorizes operating in the Miami, Orlando and Tampa metropolitan areas were operating and maintaining transportation assets worth $4.4 billion in 2009 financed primarily through user fees.

Unlike the federal HTF, the STTF has a more diverse set of revenue sources other than motor fuel taxes. And unlike the federal motor fuel tax Florida's State Fuel Sales Tax is indexed to the CPI. Other sources however are flat fees and their buying power diminishes over time.

Transportation Revenues Used for Non-Transportation Purposes

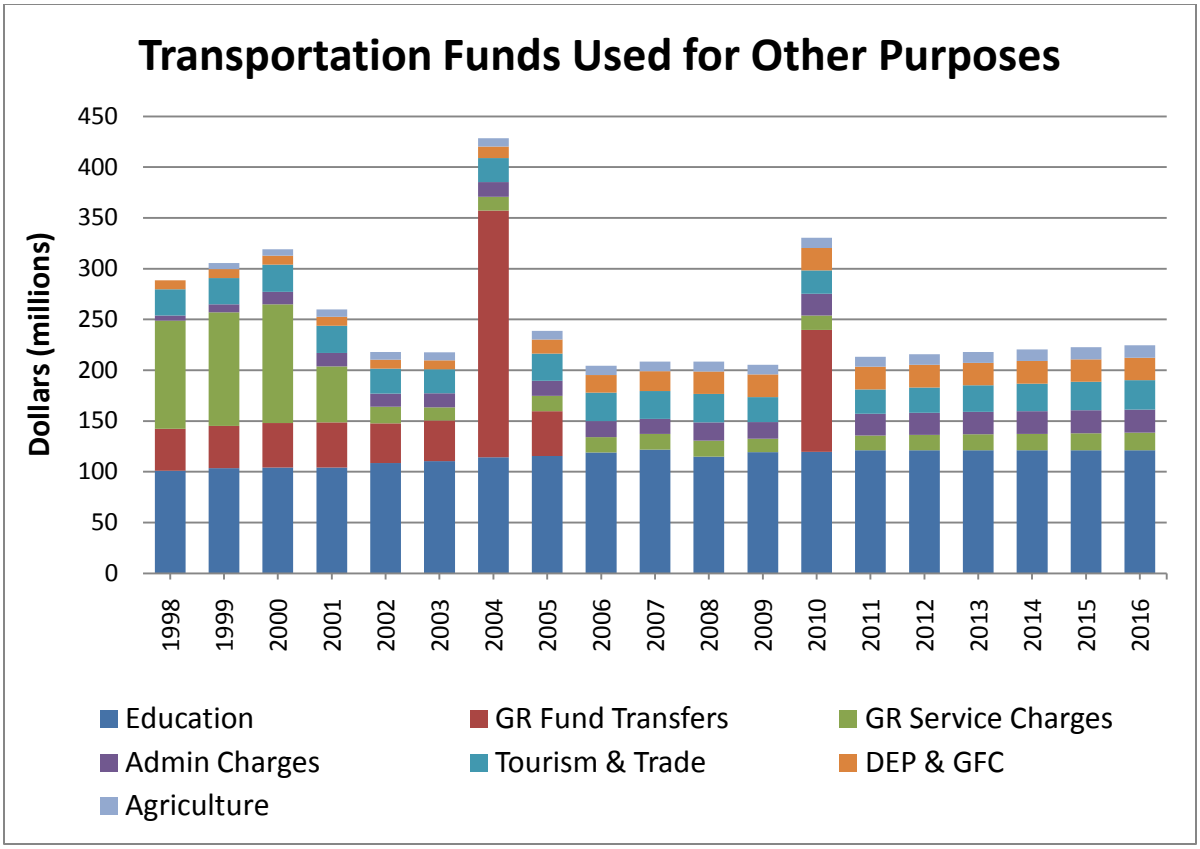
Constitutional/Statutory Diversions

Table 2 Transportation Funds Used for Non-transportation Purposes ($ millions)

	Fiscal Year														
Purpose	***05/06***	***06/07***	***07/08***	***08/09***	***09/10***	***10/11***	***11/12***	***12/13***	***13/14***	***14/15***	***15/16***	***16/17***	***17/18***	***18/19***	***19/20***
Education (22% of MVL Fees - Article XII, Section 9(d)(3), Florida Constitution and Sections 320.08 & 320.20, F.S.)	$118.9	$121.9	$114.8	$119.6	$119.6	$121.2	$121.2	$121.2	$121.2	$121.2	$121.2	$121.2	$121.2	$121.2	$121.2
General Revenue Service Charges & Administrative Charges (7.0/7.3%, Section 215.20, F.S. and various other sections)	$31.1	$30.3	$33.3	$29.7	$35.5	$35.9	$36.8	$37.7	$38.5	$39.2	$39.9	$40.5	$41.3	$41.8	$42.3
Tourism & Trade (Rental Car Surcharge ($0.37) - Section 212.0606, F.S.)	$27.9	$27.2	$28.0	$24.5	$23.0	$24.0	$25.1	$26.2	$27.2	$28.1	$29.0	$29.7	$30.5	$31.2	$32.0
DEP/GFC/FWCC (Section 206.606, F.S.)	$17.3	$19.7	$22.2	$22.2	$22.2	$22.2	$22.2	$22.2	$22.2	$22.2	$22.2	$22.2	$22.2	$22.2	$22.2
Agricultural Emergencies (Sales Tax and SCETS Tax : 0.65% of net revenues from motor fuel, Sections 206.606 and 206.608, F.S.)	$9.2	$9.5	$9.6	$9.6	$9.9	$9.9	$10.4	$10.8	$11.3	$11.8	$12.3	$12.7	$13.2	$13.8	$14.3
Transfer to General Revenue[1] (Nonrecurring transfer to General Revenue from STTF)					$120.2										
Total	$204.4	$208.5	$207.9	$205.6	$330.3	$213.2	$215.7	$218.1	$220.3	$222.5	$224.6	$226.3	$228.4	$230.2	$232.1

[1] *One time transfer to General Revenue Fund from the State Transportation Trust Fund*

Source: Statewide Revenue Estimating Conference, August 2010



Source: Statewide Revenue Estimating Conference, August 2010

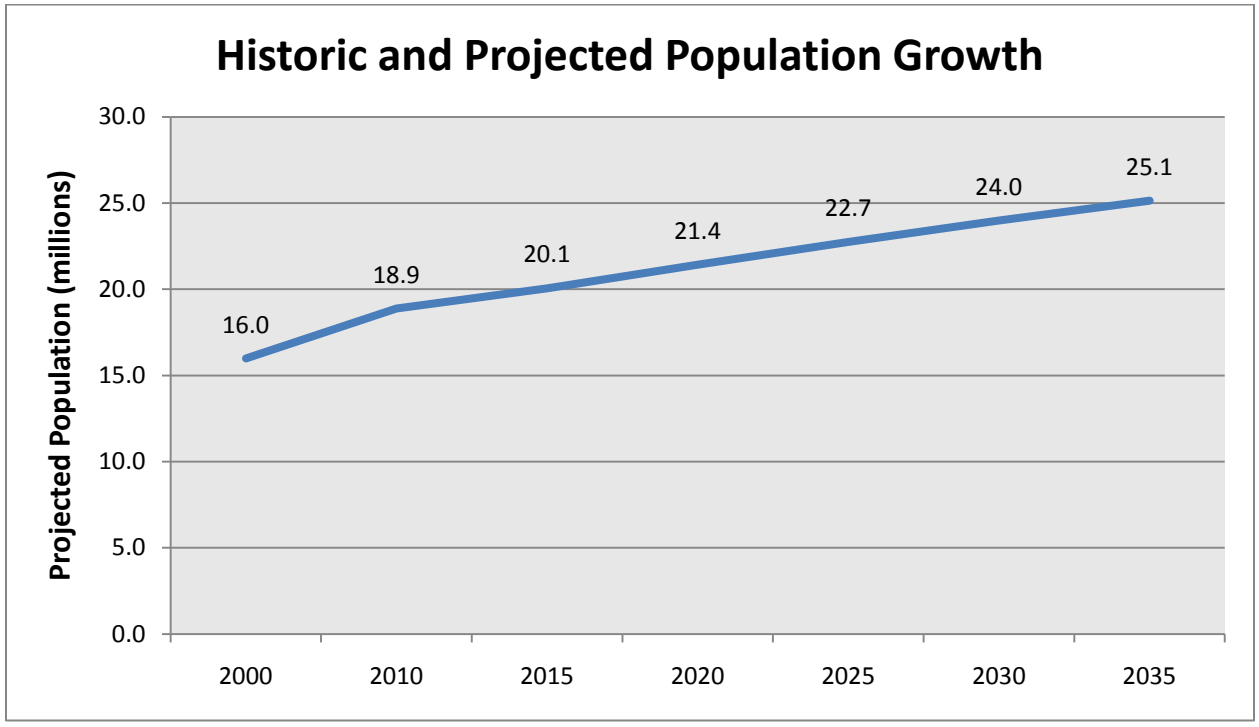
Figure 8 Transportation Funds Used for Other Purposes

Economic and Demographic Trends

This section of the paper provides an overview of trends in the areas of demographics, income growth and travel patterns as they relate to changes in fuel consumption levels in the state and the nation. The purpose is to gain some insight on future trends and to identify constraints to current financial mechanisms.

Population and Demographics

With an estimated population of over 18.9 million in 2010, Florida is the nation's fourth most populous state. Between 2000 and 2010 Florida has outpaced the nation with an annual growth rate of 1.7 percent (0.9 percent nationally). At this pace, in 2030 Florida will surpass New York to become the third largest state.

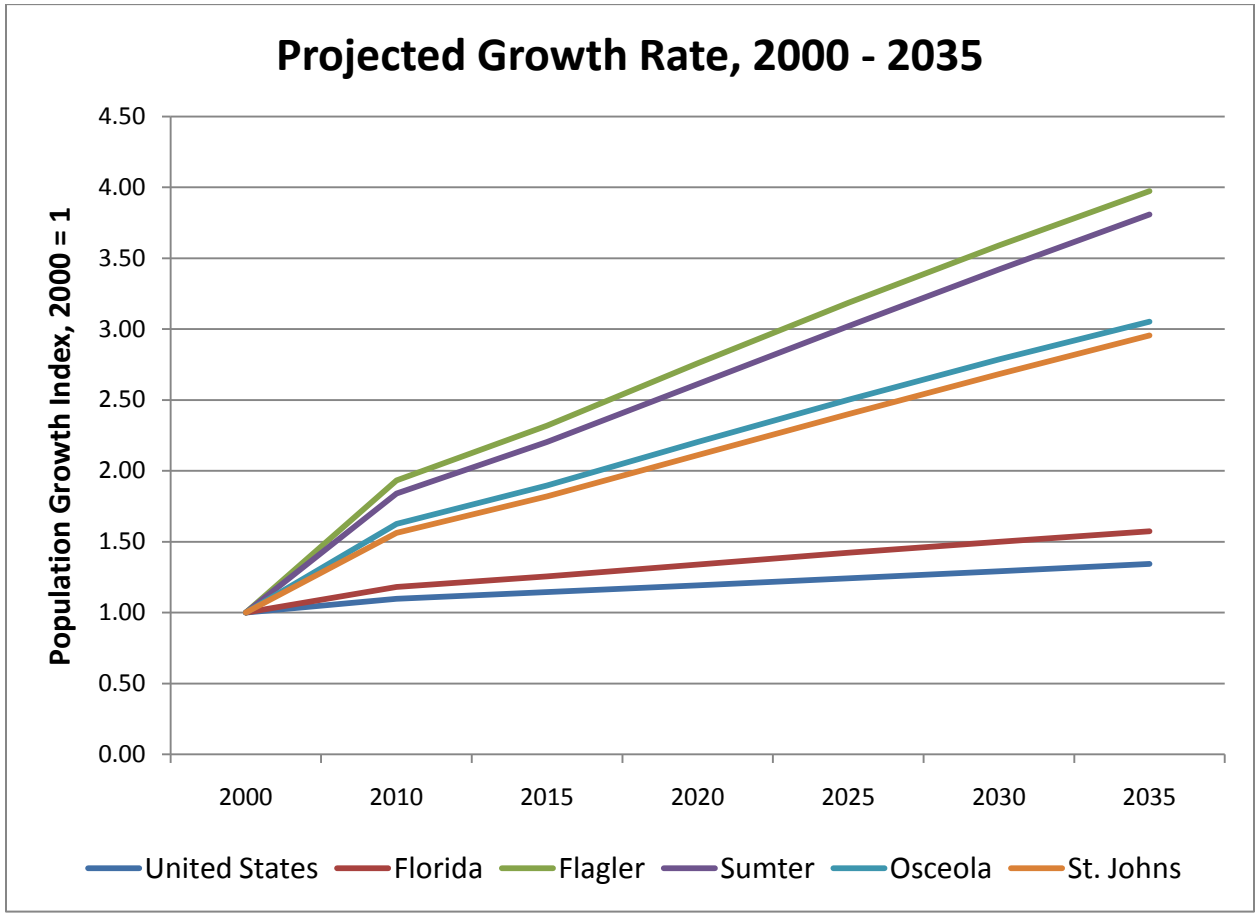


Source: U.S. Census Bureau

Figure 9 Historic and Projected Population Growth

By 2035, Florida's population will grow 9.2 million or 1.57 times with respect to 2010 levels. Thirteen counties will double their population, with four counties growing by more than three times over the course of these 35 years. The fastest growing counties are Flagler, Sumter, Osceola, and Santa Rosa. Miami-Dade, Hillsborough, Orange, and

Lee are expected to add about 2.6 million people between 2000 and 2035, accounting for 28.9 percent of the region's population growth.

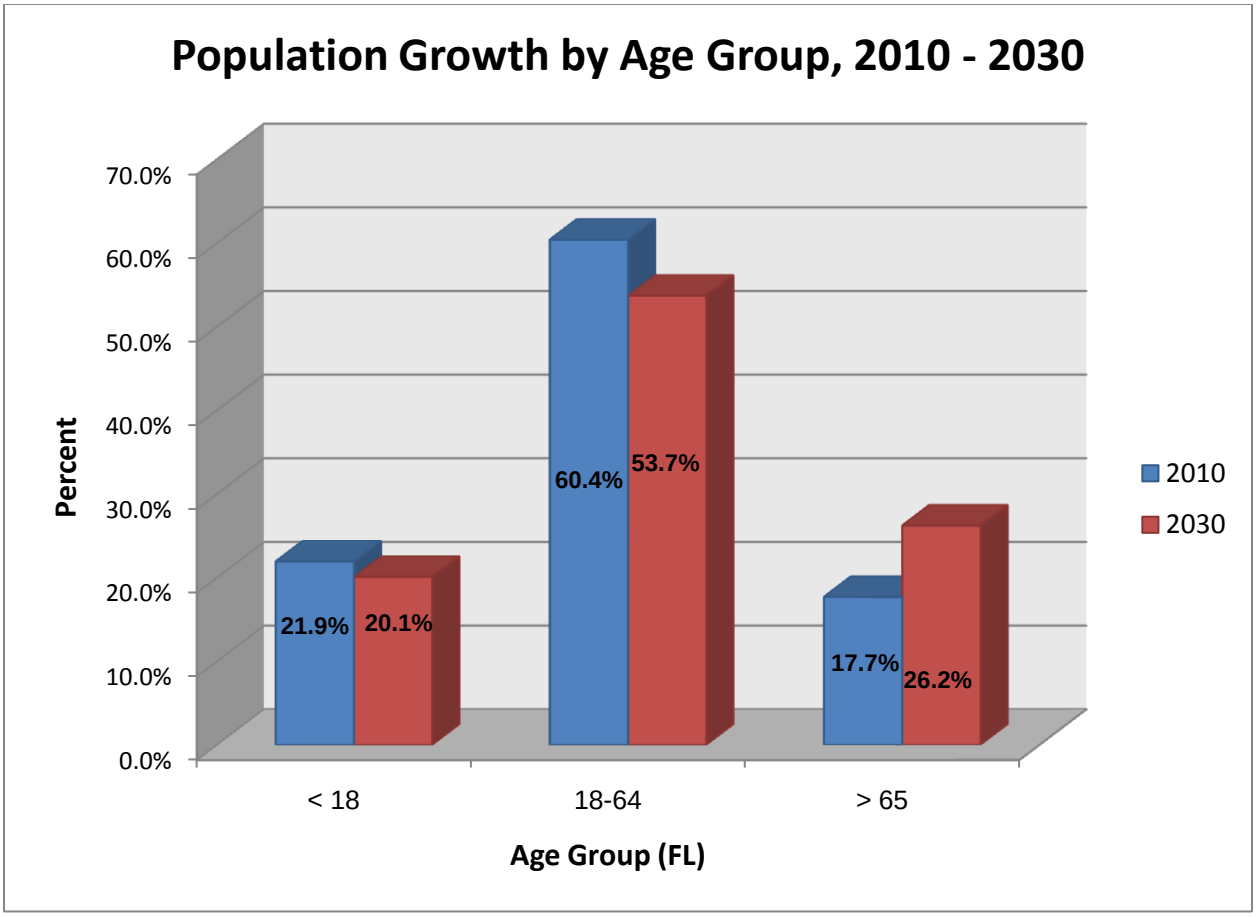


Source: U.S. Census Bureau

Figure 10 Projected Growth Rate, 2000-2035

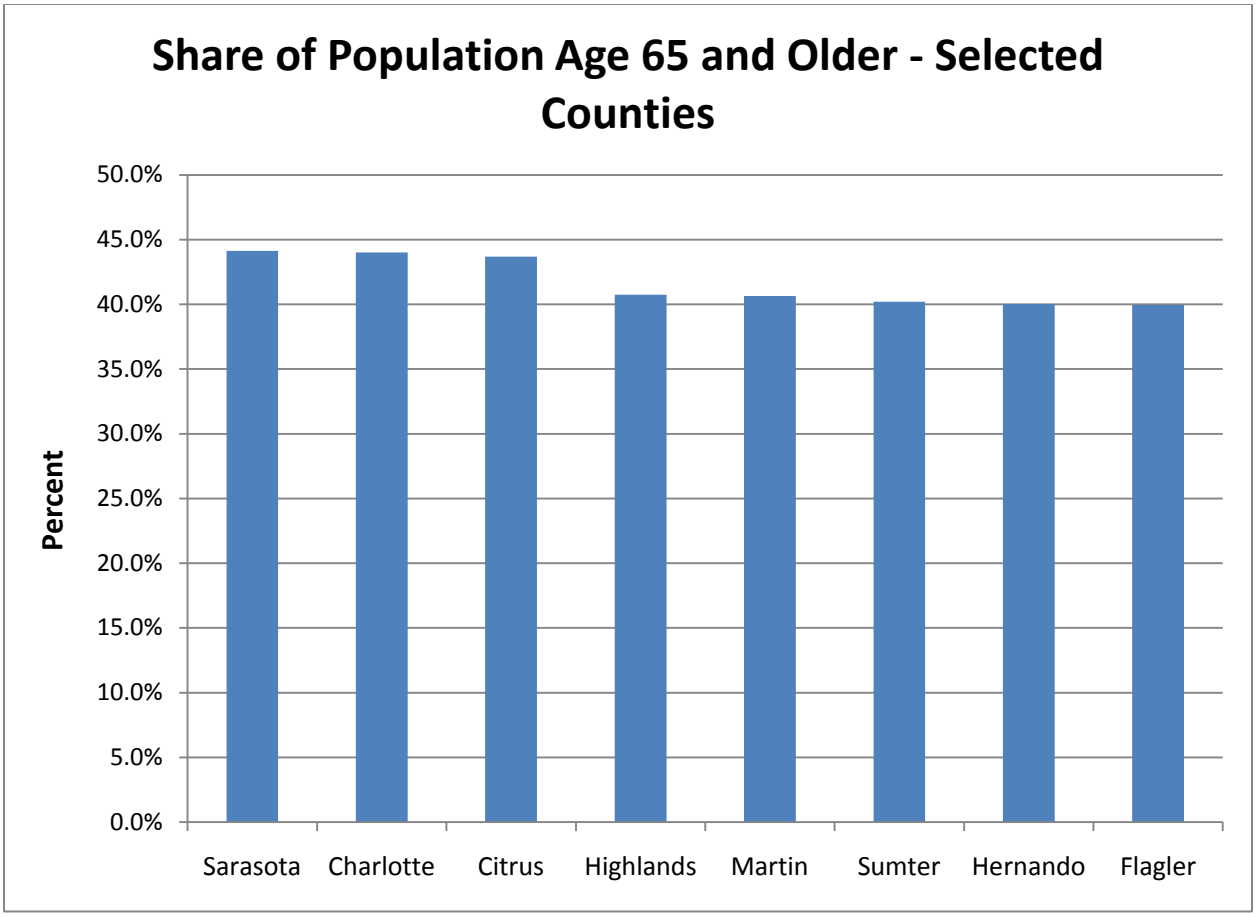
Population distribution by age cohort is an important factor in determining travel behavior, such as the size of the working age population, the number of retirees, and children of schooling age. As of 2010, the share of working age population in Florida (60.4%) is similar to the U.S. (62.2%). By 2030, the share of working age population in Florida will decline to 53.7 percent; while at the national level will decline to 56.8 percent.

By 2030, 26.2 percent of the population is projected to be 65 and older, compared to 17.7 percent in 2010. In 20 counties, more than a third of the population will be 65 and older, with eight counties having more than 40 percent of the retired population.



Source: U.S. Census Bureau

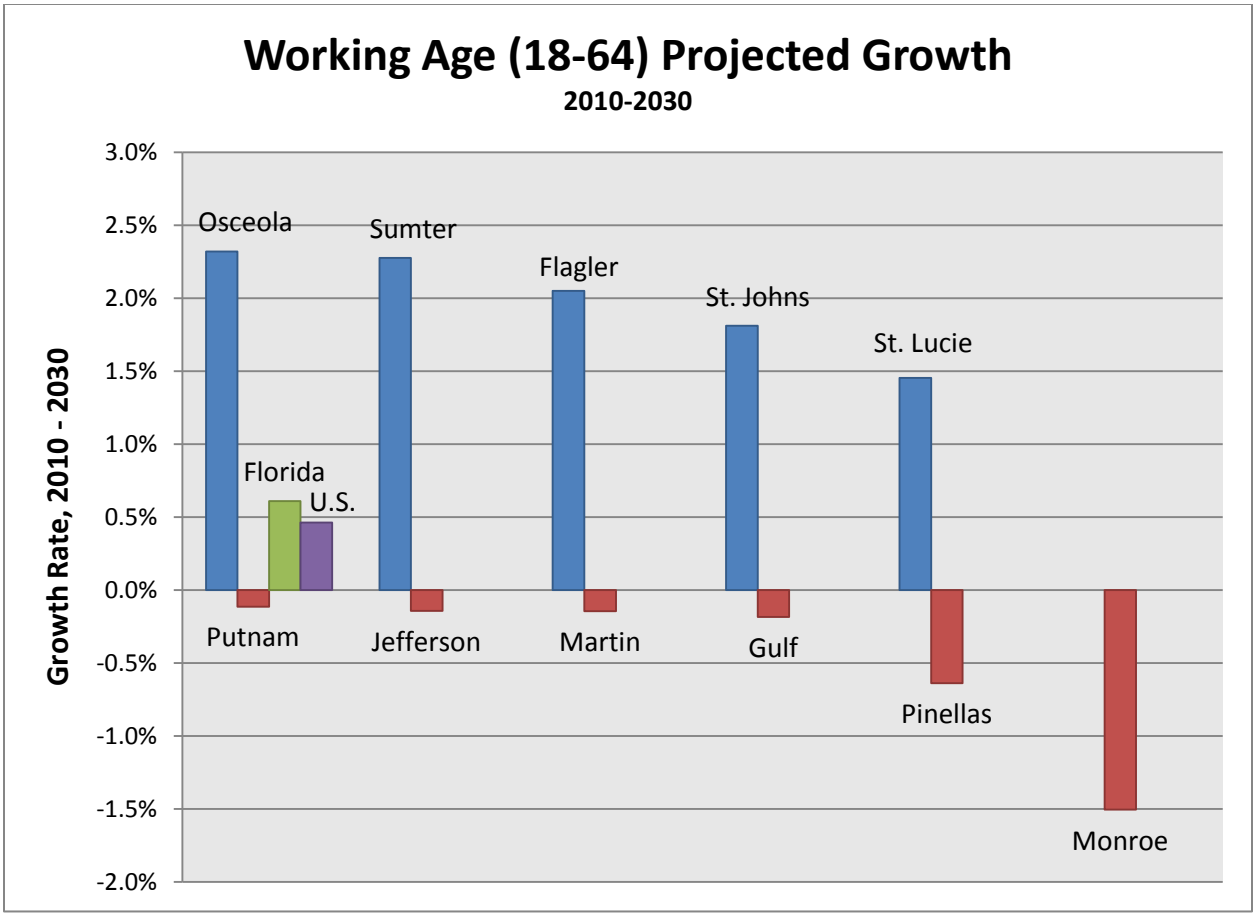
Figure 11 Population Growth Rate by Age Group, 2000-2030



Source: U.S. Census Bureau

Figure 12 Share of Population Age 65 and Older – Selected Counties

While some counties will see a decline in the working age population (18 to 64), other counties will experience a growth rate that is more than fivefold the national average (0.5% on an annual basis).



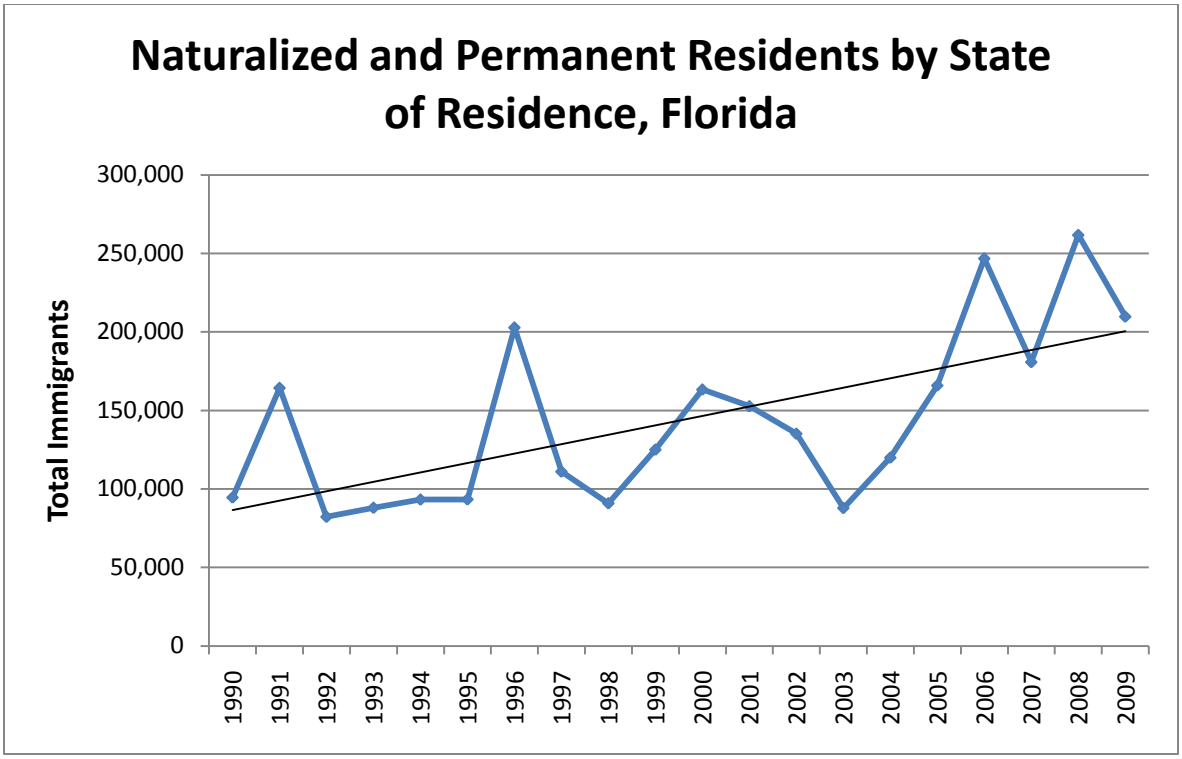
Source: U.S. Census Bureau

Figure 23 Working Age (18-64) Projected Growth, 2010 - 2030

The main drivers of population growth are the natural growth and net migration (both domestic and international). Net migration represents Florida's primary source of population, accounting for 83 percent of growth during between 2000 and 2008. The decrease in net migration in 2007-2008 is mainly due to the economic recession.

International migration will also be relevant as it has been in the past. In the period 1990-2009, international migration has increased by 120 percent, from 94 thousands to about 110 thousand naturalized and permanent residents per year.

The impact on VMT of new immigrant households is frequently overlooked, although foreign immigrants represent a growing share of the civilian work force. As highlighted by the Bureau of Transportation Statistics, the impact on additional vehicle demand by new immigrants may not be fully accounted for in VMT projections.



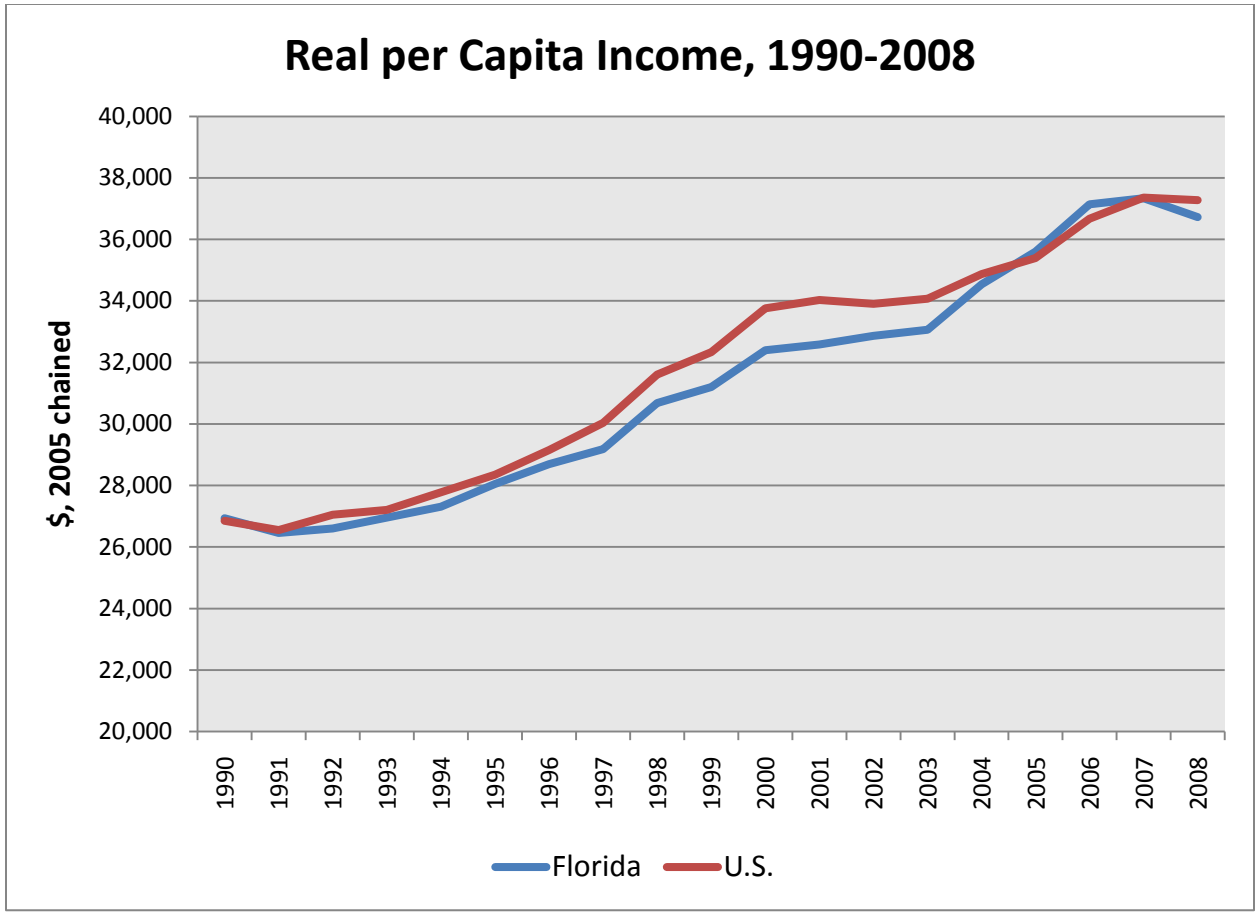
Source: Department of Homeland Security

Figure 34 Naturalized and Permanent Residents by State of Residence, Florida

Personal Income

It is recognized that income is a principal factor contributing to the growth of highway passenger travel. As income increases, individuals engage in more discretionary travel to acquire goods and services, vehicle acquisition increases, and households move farther away from work to purchase less expensive housing. As a result, passenger travel, as reflected in vehicle miles of travel (VMT) increases.

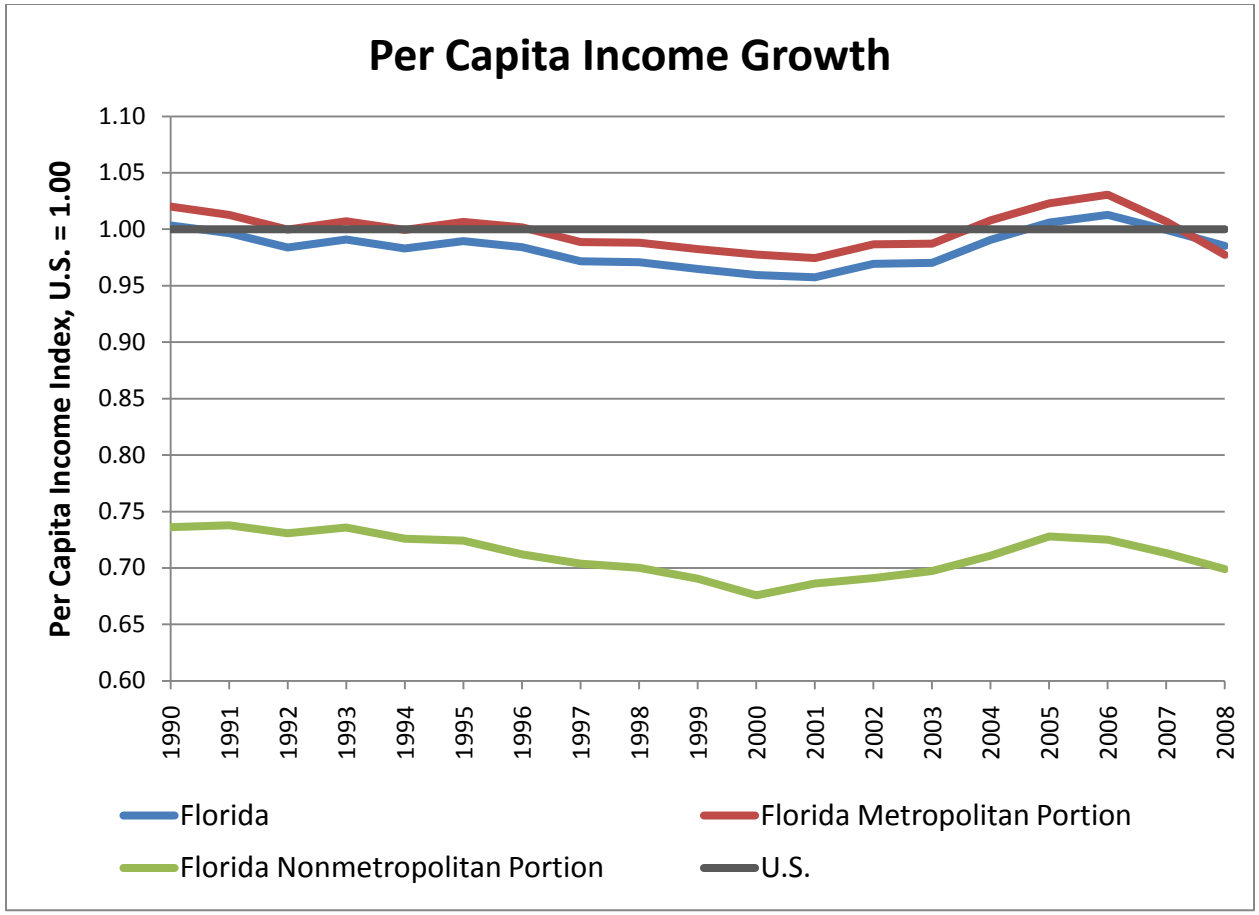
Per capita income is a fundamental measure of economic growth and is often used as a measure of prosperity for a region. Florida real per capita income (adjusted for inflation) increased by 36.6 percent between 1990 and 2009, but less than the nation (38.8%), growing about 1.5 on an annual basis.



Source: Bureau of Economic Analysis

Figure 45 Real Per Capita Income, 1990-2008

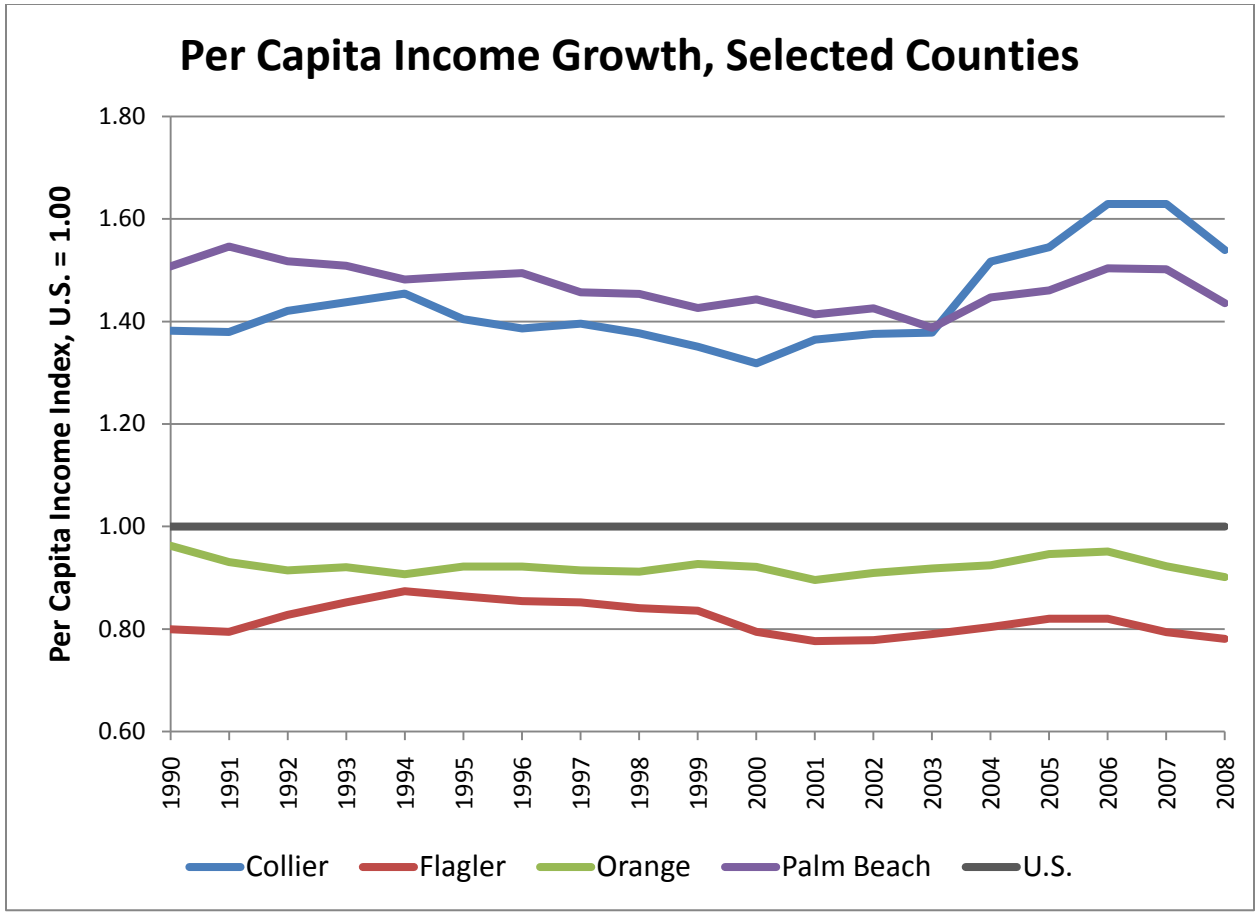
While per capita income in Florida and its metropolitan areas has fluctuated, at the U.S. level income growth in the nonmetropolitan areas has lagged substantially with respect to the state and the nation (see Figure 15).



Source: Bureau of Economic Analysis

Figure 56 Per Capita Income Growth

There is a significant gap between the highest per capita counties (Palm Beach, Martin, and Monroe) and the lowest (Union, Hamilton, and Lafayette). Counties that are expected to experience high population growth, such as Flagler, have also experienced a growth in personal income (35.5% over the 1990-2008 period), although lagging by 20 percent with respect to the state.



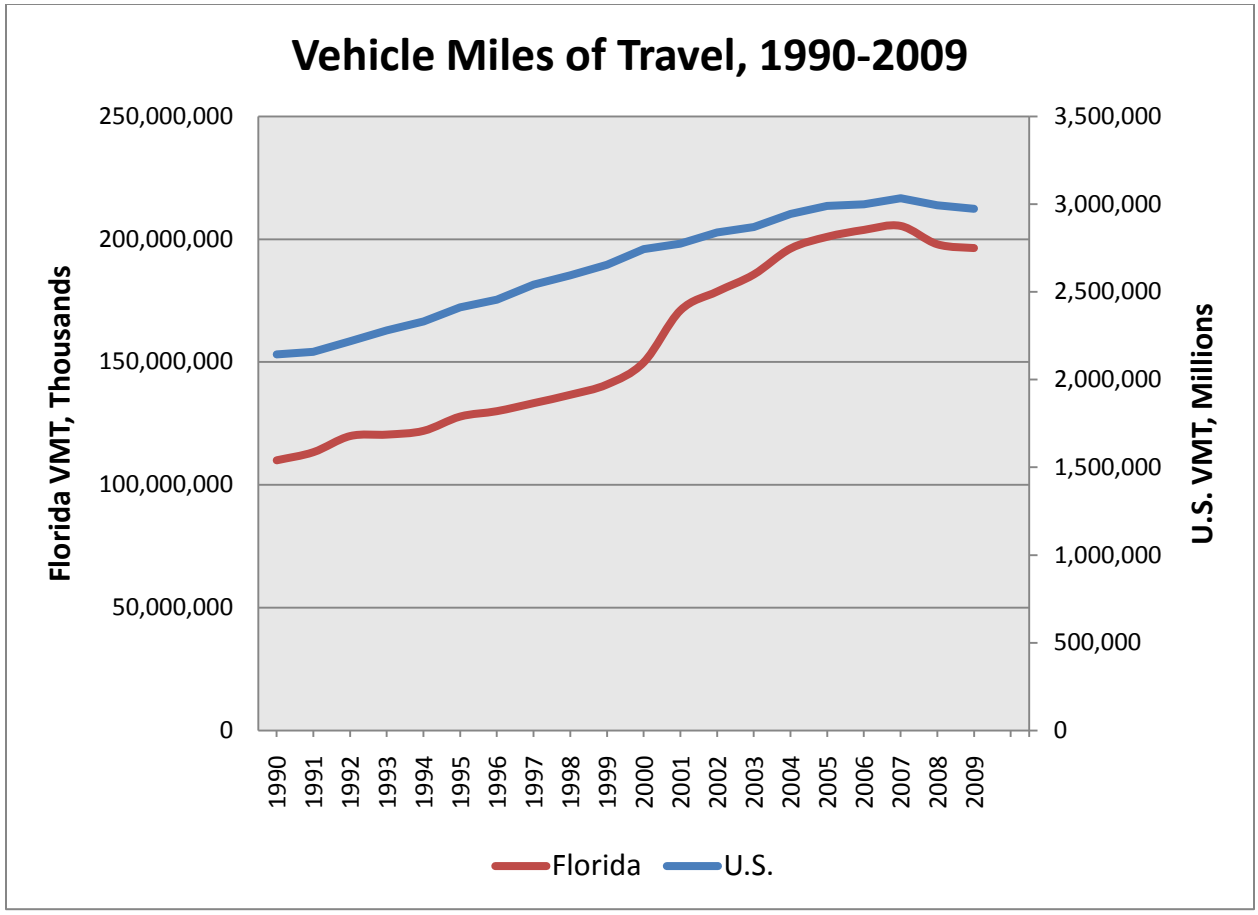
Source: Bureau of Economic Analysis

Figure 67 Per Capita Income Growth, Selected Counties

Travel Trends

Vehicle Miles of Travel

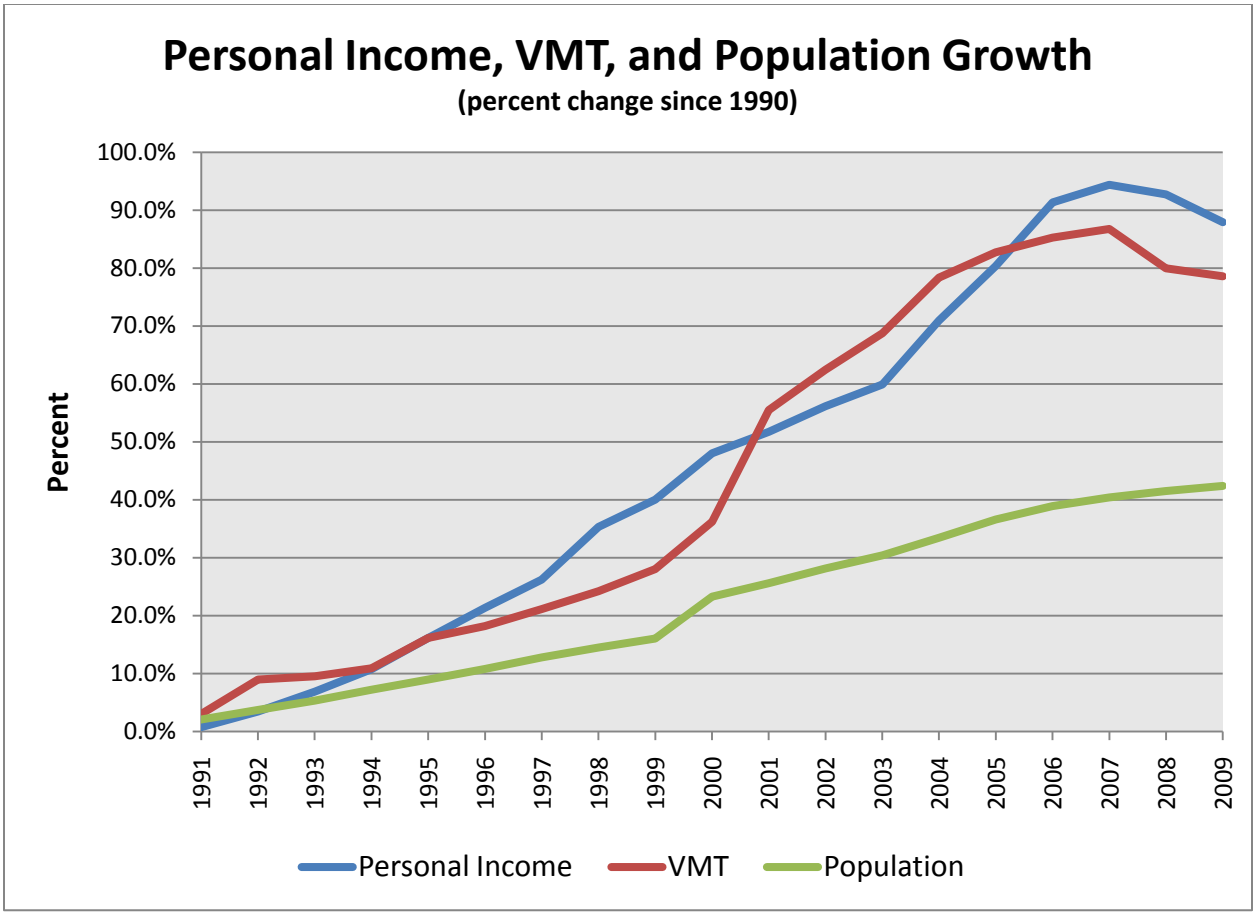
Vehicle miles of travel in Florida have been growing constantly over the years, increasing by over 78.6 percent over the period 1990-2009, compared to 38.7 percent nationwide. This translates into an average annual growth rate of 3.7 percent over the same period. VMT in Florida decreased by almost 4 percent in 2008 and another 0.8 percent in 2009 as a result of economic slowdown, higher fuel prices, lower tourism levels and reduced freight travel.



Source: Florida Highway Data Source Book and the Florida Public Road Mileage Reports; Federal Highway Administration Traffic Trends

Figure 78 Vehicle Miles of Travel, 1990-2009

The growth in VMT follows the growth in real personal income and population, with similar patterns during periods of economic recession and expansion. From 1990 to 2009, VMT grew at 3.7 percent per year, real personal income grew 3.4 percent per year, and total population grew by 2.9 percent per year.

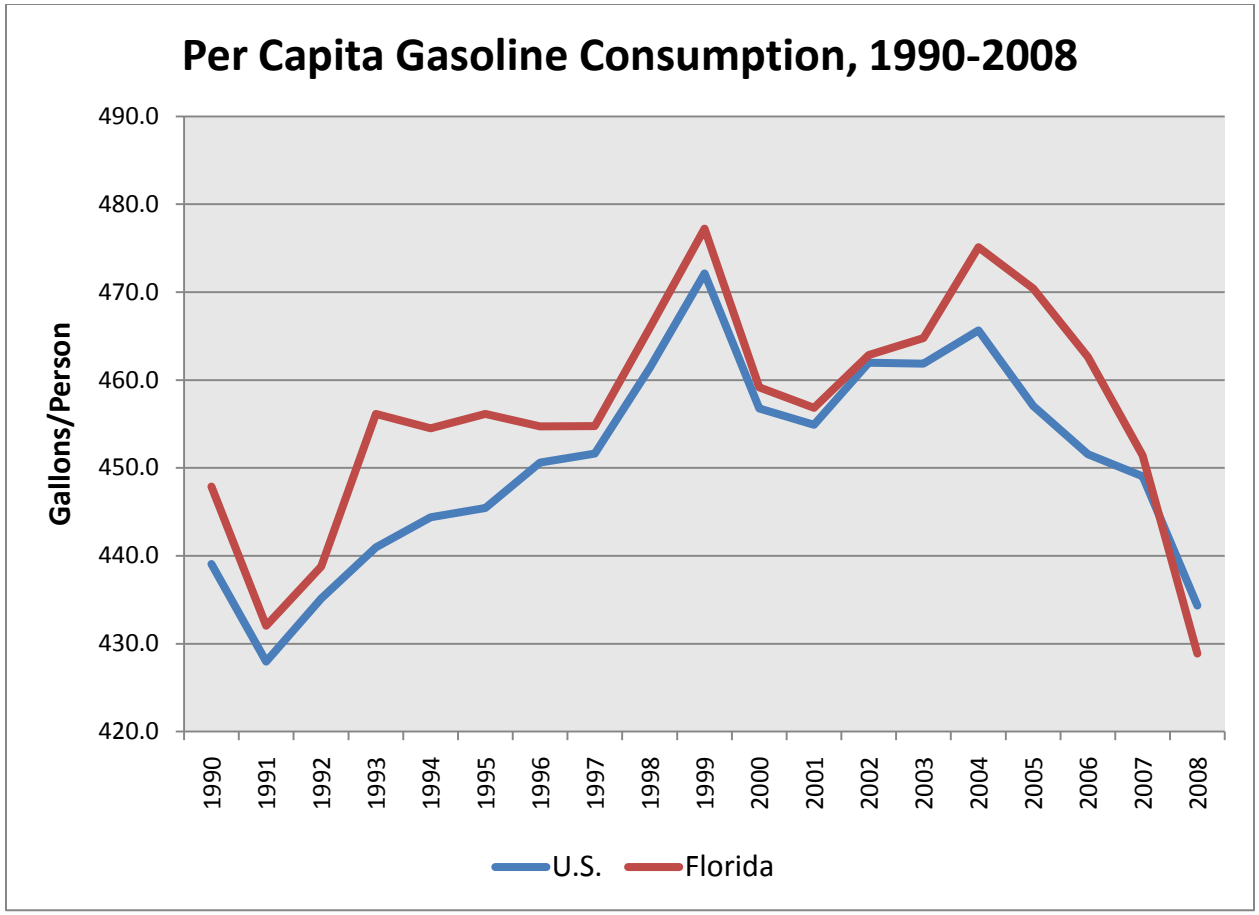


Source: Bureau of Economic Analysis, U.S. Census, FHWA Highway Statistics

Figure 89 Personal Income, VMT, and Population Growth (percent change since 1990)

Gasoline Consumption

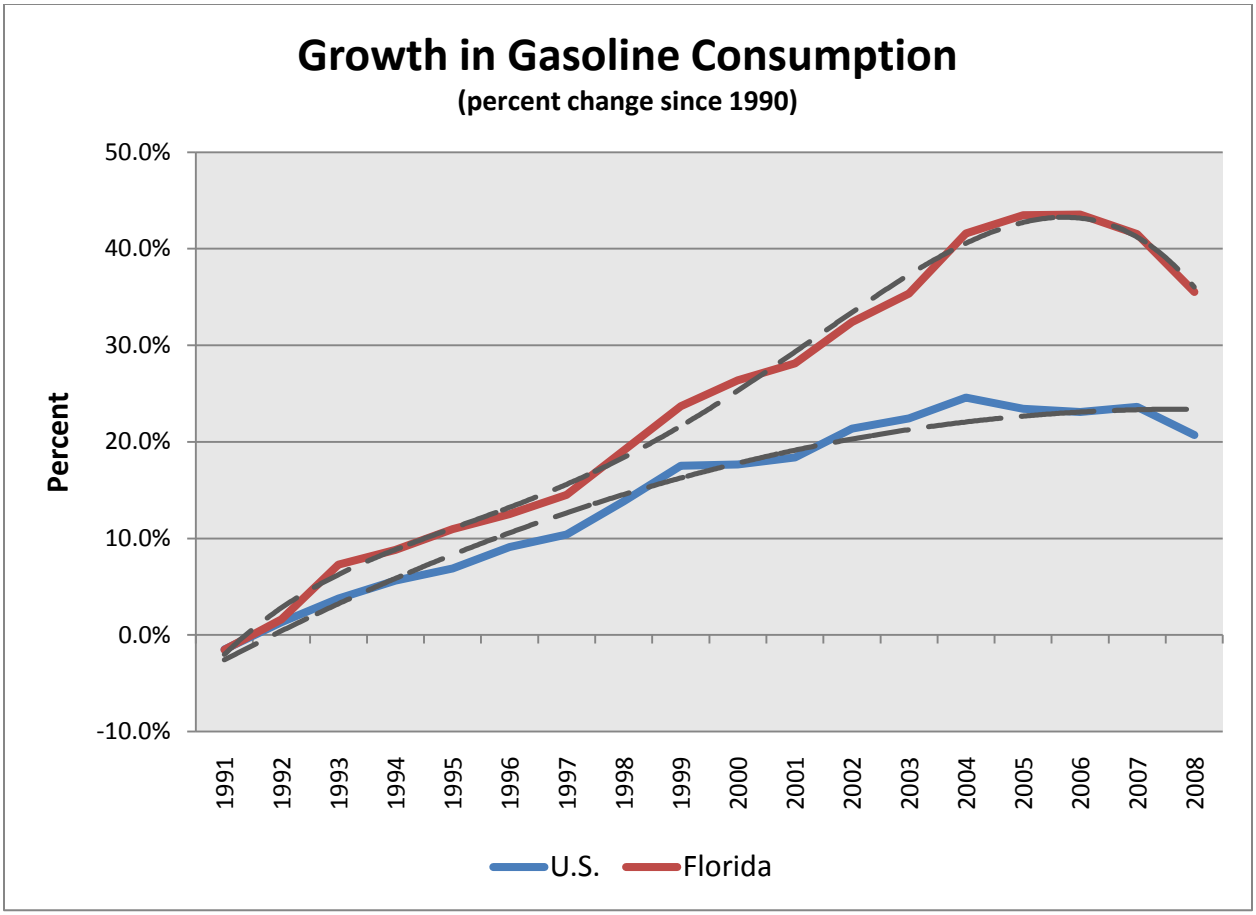
The differences in VMT between Florida and the rest of the nation are reflected in gasoline consumption patterns. As shown in Figure 20, per capita gasoline consumption has been higher than the national average. The sharp decline of the past three years is consistent with the current economic downturn conditions.



Source: CUTR calculations based on U.S. Census and FHWA Highway Statistics data

Figure 20 Per Capita Gasoline Consumption, 1990-2008

A closer look shows that consumption trends between Florida and the nation differ in terms of trends. Apart from the decline associated with the current economic conditions, the period between 1990 and 2005 is characterized by a sharp increase in gasoline consumption with an almost exponential trend, while consumption at the national level was flattening and growing at a decreasing rate. This is consistent with the VMT trend of Figure 18 and with mode share differences between the state and the nation. About 79 percent of Florida workers commute to work by automobile, compared to 76 percent at the national level. Furthermore, public transportation accounts for only two percent of commuter trips, less than the national average of 5 percent.



Source: Federal Highway Administration Statistics

Figure 91 Growth in Gasoline Consumption (percent change since 1990)

Potential Changes in the Federal Role

Reviews and Summaries of Recent National Revenue Studies

Summary of Report of the National Surface Transportation Policy and Revenue Study Commission: Transportation for Tomorrow, January 2008

Congress established the National Surface Transportation Policy and Revenue Study Commission (Commission) to thoroughly review the nation's assets, policies, programs and revenue mechanisms and prepare a "conceptual plan" that would integrate all of the elements and outline a vision for long-term transportation that would benefit the nations and its citizens.

The Commission met and hosted a number of public hearings throughout the course of a 20-month study period. Early on, the Commission agreed that the fundamental motivation of the Commission was to help the "United States to create and sustain the pre-eminent surface transportation system in the world." The Commission determined that establishing this "lofty goal" would assist it in developing an action plan aimed at the ultimate achievement – to be the best."

The Commission suggested that the U.S. could claim best-in-class status in surface transportation when the following statements described America's transportation system:

- Facilities are well maintained
- Mobility within and between metropolitan areas is reliable
- Transportation systems are appropriately priced
- Traffic volumes are balance among roads, rails and public transit
- Freight movement is an economic priority
- Safety is assured
- Transportation and resource impacts are integrated
- Travel options are plentiful
- Rational regulatory policies prevail

Within the new surface transportation system, funding and function will be linked, and substantial new transportation investments will produce the kind of results that can be estimated in rigorous benefit-cost analyses and tracked by means of performance-based outcomes. Improvements will be designed, approved and completed quickly, and

without unnecessary delays. The system will be fully integrated by mode and will provide mobility to all users. Sensitivity to the environment, energy efficiency, and incorporation of advanced technology will be required in the new system that will foster economic development and spur record output and productivity growth.

Today's Problems

America's surface transportation systems, including roads, bridges and highways, passenger and freight rail facilities, and public transit networks, are deteriorating, the physical infrastructure is showing signs of age, and the operational efficiency of transportation assets is declining. The Texas Transportation Institute has estimated that highway congestion cost the American economy $78 billion in 2005, when measured in terms of wasted fuel and workers' lost hours. The average peak-period commuter spent an extra 38 hours of travel time and consumed an additional 26 gallons of fuel as a direct result of highway congestion. Failure to develop a national strategy to reduce congestion and an over-reliance on the personal automobile for travel in urban corridors serve to exacerbate gridlock. Efforts to shift trips to public transit, replace long-haul automobile trips with intercity passenger rail, and add capacity where necessary are all required to reduce congestion.

Efforts must also be undertaken to enhance the safety of the nation's surface transportation system. Highway travel accounts for 94 percent of all fatalities and 99 percent of the injuries that occur on all surface transportation facilities. While U.S. fatality and injury rates have fallen, when calculated on a total-miles-driven basis, in 2006, over 42,000 people lost their lives and almost 2.6 million were injured on highways.

Attempts to reduce reliance on petroleum fuels are critical from several perspectives. Since most vehicles operate on gasoline and diesel fuel – the transportation sector as a whole accounts for two-thirds of U.S. petroleum use - American households and businesses feel the immediate impact of escalating fuel costs. In addition, greenhouse gases, which are emitted when petroleum-based fuels are burned, are now recognized as a chief contributor to global warming. Transportation policy must be aligned with energy policy to reduce reliance on petroleum fuels and promote research on alternatives.

In the absence of an objective, performance-based method of assessing individual projects, investment decisions are often political rather than substantive, as is evidenced by the increase in congressional earmarks from 10 projects in 1982 to more than 6,300

projects in the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), which was passed in 2005.

Future Challenges

Current estimates of population growth in excess of 120 million people over the next 50 years will only serve to expand the nation's need for personal and commercial transportation services. For commuters in metropolitan areas, where most growth is expected to occur, congestion will increase and spread beyond the traditional morning and evening rush hours. Economic forecasts predict that freight volumes will be 70 percent higher in 2020 compared with 1998 due to enhanced global integration, and American businesses will have difficulty competing in the global marketplace as a result of the inefficient movement of goods. To upgrade our existing transportation network to a state of good repair and to build the more advanced facilities, the U.S. will be required to invest at least $225 billion annually for the next 50 years. Today, we are spending less than 40 percent of this amount, and it is doubtful that our present fuel-tax-based system will produce sufficient revenues.

Special efforts must be taken to ensure that transportation systems of the future are sensitive to environmental needs and are not made at the expense of the nation's environment. The quest for cleaner fuels and greater energy security will be a significant factor in the development of future transportation plans as attempts are made to eliminate the often onerous and procedure-bound environmental reviews that are required today. According to the Federal Highway Administration, major highway projects take about 13 years from start to finish, and the Federal Transit Administration reports that the average project-development period for New Starts exceeds 10 years.

Recommendations for Reform

The Commission outlined the following key elements to create and sustain the nation's future per-eminent transportation system:

Increased Investment

- Increased public funding
- Increased private investment
- More tolling
- New and innovative ways of funding
- Price for use of the system

Federal Government as a Full Partner

- Federal government becomes a full partner with state, local governments, and the private sector.

A New Beginning

- Invest more money into the transportation system.
- Create a system where investment is subject to benefit-costs analysis and performance-based outcomes that:
    - Ensures that each project is designed, approved, and completed quickly
    - Provides a fully integrated mobility system that is the best in the world
    - Emphasizes modal balance and mobility options
    - Dramatically reduces fatalities and injuries
    - Environmentally sensitive and safe
    - Minimizes use of our scarce energy resources
    - Eases wasteful traffic delays
    - Supports just-in-time delivery
    - Allows significant economic development and output

Key Elements of the New Beginning

- Revise the federal surface transportation program prior to reauthorization as follows:
    - The federal program should be performance-driven, outcome-based, generally mode-neutral, and refocused to pursue objectives of genuine national interest.
    - Replace the 108 existing surface transportation programs in SAFETEA-LU with the following 10 new federal programs:
        - Rebuilding America – state of good repair
        - Global Competitiveness – gateways and goods movement
        - Metropolitan Mobility – regions greater than 1 million population
        - Connecting American – connections to smaller cities and towns
        - Intercity Passenger Rail – new regional networks in high-growth corridors
        - Highway Safety – incentives to save lives
        - Environmental Stewardship – both human and natural environments
        - Energy Security – development of alternative transportation fuels
        - Federal Lands – providing public access on federal property
        - Research and Development – a coherent national research program

  - USDOT, state and regional officials, and other stakeholders would establish performance standards in the federal program areas outlined above, develop detailed cost plans to achieve those standards that contain estimates of cost, and assemble plans into a national surface strategic plan.
  - Federal investment would be directed by the national surface transportation strategic plan, and funding would be restricted to projects detailed in the plan with all levels of government held accountable to the public for achieving the results promised.
- Based on the Commission's recommendation, Congress would establish an independent National Surface Transportation Commission (NASTRAC), modeled after aspects of other federal and state commissions that would be responsible for:
  - Overseeing various aspects of the development of the outcome-based performance standards and detailed plans to achieve those standards in the new federal programs.
  - Upon approval of the national strategic plan, NASTRAC would establish a federal share to finance the plan and recommend an increase in the federal fuel tax to fund that share, subject to congressional veto.
- Reform the project delivery process by significantly shortening the time it takes to complete reviews and obtain permits while retaining current environmental standards.

Paying the Bill – Major Revenue Recommendations

General Recommendations

- All levels of government and the private sector contribute their appropriate shares.
- Strong support for the principle of user financing, which has been at the core of the nation's transportation funding system for half a century.
- Continuation of the budgetary projections for the Highway Trust Fund, so that user fees benefit the people and industries that pay them.

Specific Recommendation

- Legislation should be passed to keep the Highway Account of the Highway Trust Fund solvent and prevent investment from falling below the levels guaranteed in SAFETEA-LU.

Specific Recommendations, 2010 – 2025

- Phase in a 25 – 40 cent increase in the federal fuel tax over a period of five years (5 – 8 cents per gallon per year) with the rate increase indexed to the construction cost index (necessary to achieve the traditional federal share of 40 percent of total transportation funding with an investment target of $225 to $340 billion).
- Establish other federal user-based fees to help address the funding shortfall, such as a freight fee for goods movement, dedication of a portion of existing custom duties, and ticket taxes for passenger rail improvements.
- Congress should remove certain barriers to tolling and congestion pricing, under conditions that protect the public interest, specifically by modifying the current federal prohibition against tolling on the Interstate System to allow:
    - Tolling to fund new capacity and the flexibility to price the new capacity to manage its performance; and,
    - Congestion pricing on the new and existing portions of the Interstate System in metropolitan areas with populations greater than one million.
- Congress should encourage the use of public-private partnerships, including concessions, for highways and other surface transportation modes.
- State and local governments should raise motor fuel, motor vehicle, and other related user fees to draw upon for their share of new investment and should take advantage of the expanded opportunities the Commission has recommended in tolling, concessions pricing, and public-private partnerships.

Specific Recommendation, post-2025 Era

- The next authorization bill should require a major national study to develop the specific mechanisms and strategies for transitioning to vehicle miles traveled (VMT) fee, a promising revenue alternative, or another alternative to the motor fuel tax to fund surface transportation programs.

Minority View

A minority report was issued by a group composed of the Commission chair and two Commissioners, who expressed a core difference of opinion and precluded the Commission from reaching a consensus on the report.

Minority views reflect the following themes:

- The federal role in transportation policy and investment should be determined only by that which is essential to the national interest (Commission derives responsibility based on the historic 40% share of transportation funding).

- The fact that the public has overwhelmingly opposed an increase in federal fuel taxes since 1993 represents a lack of investor confidence in current transportation policy – neither Congress nor successive administrations have supported increases in gas taxes, despite the obvious and rapid deterioration in transportation system performance.
- Continued dependence on fuel taxes not only fails to align supply and demand properly, it is also consistent with national energy policy (Commission proposes to expand transportation capacity by increasing government taxation of a commodity whose consumption we seek to discourage).
- While the Commission Report recognizes the potential of road pricing to reduce congestion and improve system efficiency, it does not recognize pricing as the essential element in a proper alignment of supply and demand as it is in almost every other major sector of our economy – in addition to generating resources, prices help depoliticize investment decisions by sending clear signal where new capacity is most badly needed.
- Although the Commission Report identifies the growing availability of private infrastructure capital, the Commission Report actually proposes unprecedented new national regulations on states wishing to contract with the private sector (There is a vast amount of private sector capital and capacity for investment and innovation that can be brought to bear to improve the U.S. transportation system in a price-and-invest versus a tax-and-spend policy.

Areas of Disagreement

1. **Federal fuel taxes are not a solution** – tax is ineffective as users pay the same per gallon fuel tax or other indirect tax to use a higher-value facility at peak travel hours as they do to use a significantly lesser-value facility in off-peak travel hours, resulting in over-consumption or under-consumption; breeds wasteful spending because our current system is neither performance driven nor accountable; Commission Report fails to adequately consider the potential of more effective and bold alternatives; and, timing of alternatives to replace fuel taxes prolong for at least another 18 years a tax-based system that neither send the correct price signals to users nor promotes accountability for project delivery.

2. **Unnecessarily large federal role** – federal programs should focus on federal objectives such as preservation and improvement of the Interstate Highway System, interstate freight movement, safety programs, projects of national or regional significance, and research supportive of national goals.

3. **Inappropriate definition of "need" –** the Commission Report assumes that any project, whose benefits outweigh its costs, even if only by a dollar, should be constructed.

4. **An independent governance commission is neither practical nor good policy –** insulation of the transportation planning process from political intervention is unlikely to happen as it would require either Congress or the executive branch to cede control of infrastructure investment to an autonomous body; and, would simply add another layer of bureaucracy to the decision-making process.

5. **New federal restrictions on pricing and private investment –** the Commission Report proposes to increase and tighten federal restrictions on the use of these solutions; proposes no restrictions on the ability of states to raise transportation revenues from non-users; there are clearly major sections of interstates through rural and urban areas (non-metropolitan areas with one million or more in population) where pricing would be viable; the Commission Report recommends that Congress encourage the use of public-private partnerships, but contains no proposals in this regard; and, public opinion results show a clear preference for toll roads over increases in gasoline and other traditional transportation taxes in recent years.

6. **The Commission Report is inconsistent in its approach to earmarking –** the report recommends that seven percent of transportation funding be set aside for environmental compatibility purposes, but without tying this funding level to any identified actual needs.

7. **The Commission's energy research and investment recommendations are inappropriate –** national energy research is not under the purview of the Commission, but rather the Department of Energy.

A Path Forward

The minority view approach would sustain current gasoline and diesel tax levels and refocus federal efforts on maintaining the Interstate Highway System; alleviating freight-related bottlenecks that impede the flow of commerce and goods; and providing states with appropriate analysis.

Existing Highway Trust Fund receipts would be re-programmed at the federal level for the achievement of these key federal objectives. The remaining funds would stay at the

state level. USDOT would maintain regulatory oversight related to the safety of transportation infrastructure. Federal infrastructure regulations that are not cost-beneficial would be eliminated, most importantly restrictions against tolling and participation by the private sector.

Summary of National Surface Transportation Infrastructure Financing Commission (NSTIFC) Report

Over the past few decades, the U.S. devoted less and less money in real terms to the maintenance and expansion of the surface transportation infrastructure. Not only did the nation fail to make the needed and substantial investment in maintaining the transportation system, it also failed to pursue the kind of innovation necessary to ensure that the nation's infrastructure meets the demands of the future generations. The resulting deterioration of the U.S. surface transportation system is so severe, that it threatens our safety, economic competitiveness, and the quality of life.

The United States Congress has recognized the dangers of inattention and delay and requested assistance in reviewing the way the federal government funds and finances national surface transportation infrastructure. Congress established the National Surface Transportation Infrastructure Financing Commission (Commission) to embark on an investigative and analytical effort to assess the funding crisis and make recommendations to address the growing transportation infrastructure investment deficit. The Commission sought out best ideas, the latest data, and the strongest research to review, analyze and compare all possible funding options. While recognizing the importance of other transportation modes, the Commission focused its work on highway and transit infrastructure.

To guide its work of identifying appropriate funding options, the Commission established a set of goals for the national surface transportation system, including that it be safe, effective, efficient, fair and sustainable. And to achieve these fundamental goals, the Commission developed a set of principles to guide consideration of funding and finance approaches. The following guiding principles were used by the Commission:

- The funding and finance framework must support the overall goal of enhancing mobility of all users of transportation system;
- The funding and finance framework must generate sufficient resources to meet national investment needs on a sustainable basis;

- The funding and finance framework should cause users and direct beneficiaries to bear the full cost of using the transportation system to the greatest extent possible;
- The funding and finance framework should encourage efficient investment in the transportation system (recognizing the inherent differences between and within individual states);
- The funding and finance framework should incorporate various equity considerations (e.g., generational equity, equity across income groups, geographic equity, etc.); and,
- The funding and finance framework should support the broad public policy objectives of energy independence and environmental protection.

These principles do not have a priority order but rather need to be considered collectively.

The roots of the current crisis lie in the failure to recognize dangers of deferring the required investment in the nation's surface transportation infrastructure, magnified by aging infrastructure, growing population, and expanding economy. Highways serve as the backbone of the U.S. transportation infrastructure. They provide citizens with a high degree of personal mobility and are integral to the movement of freight and the productivity of the U.S. industry. Despite improvements in some areas, the performance of the nation's highway system is generally in decline. From 1980 to 2006, the total number of miles traveled by automobiles increased 97 percent and the miles traveled by trucks 106 percent. Over the same period, the total number of highway lane miles grew only by 4.4 percent, meaning that essentially the same roadway capacity has to accommodate now twice the traffic. Such heavy use puts a significant strain on the nation's transportation infrastructure.

As of 2006, over half of the total vehicle miles traveled on the overall federal-aid highway system occurred on roads that were in less than good condition. More than one quarter of the nation's bridges are structurally deficient or functionally obsolete, and roughly one quarter of the nation's bus and rail assets are in marginal or poor condition.

Traffic congestion is worsening in many metropolitan areas. A 2007 Urban Mobility Report, published by Texas Transportation Institute (TTI), reports that urban travelers are delayed in rush hour traffic nearly 40 hours (one work week) per year, and in total Americans spend 4 billion hours per year stuck in traffic. From 1982 to 2005, hours of delay per traveler increased 171 percent and total hours of delay increased 425 percent.

TTI estimates that over the same period of time, the total cost of congestion increased 383 percent and currently exceeds $78 billion per year at the nation's 437 urban areas, including lost time, wasted fuel, and vehicle wear and tear.

Public transportation plays a significant role in mitigating congestion, conserving fuel, enhancing transportation system efficiency, and addressing air quality issues. However, the nation's transit systems face many challenges. Total ridership grew by 32 percent from 1995 to 2007 (2.4 percent annually), with a revived growth in the recent years (in response to the increase in motor fuel prices in 2008). Between 1996 and 2006, more than 460 miles of fixed-guideway public transportation were added in 26 cities (exclusive of commuter rail service using private rail facilities).

However, due to ridership growth, many existing transit systems are now operating near or in excess of their physical capacity and above a level that provides acceptable passenger comfort and safety. Roughly one quarter of the nation's bus and rail assets are near or past their useful life or have one or more defective or deteriorated components. Many rural areas currently do not have any transit service, and in areas that do have service, the quality and coverage is inconsistent.

The federal government does not bear the sole responsibility for the current funding crisis. All levels of the government are failing to keep pace with the demand for transportation investment. This causes an ever-expanding backlog of investment needs and the cost of delaying this investment grows every year. Without change to current policy, it is estimated that revenues raised by all levels of government for capital investment will total only about one-third of approximately $200 billion necessary each year to maintain and improve the nation's highways and transit systems. Similarly, at the federal level, the long –term annual average Highway Trust Fund (HTF) revenues are estimated to be $32 billion compared with required investments of nearly $100 billion per year.

The bulk of HTF revenue (about 89 percent) is raised through federal excise taxes on highway motor fuels, with the remaining revenue coming from taxes on truck tires, sale of trucks and tractor trailers, and heavy vehicle use tax (HVUT). Currently, each 1 cent per gallon of gasoline tax yields approximately $1.4 billion annually, and each 1 cent per gallon of diesel fuel yields approximately $400 million. While the components of HTF revenues were growing rather modestly in nominal terms (e.g., motor fuel taxes) or even decreasing at the time of economic downturns (e.g., non-fuel tax revenues), the trust fund expenditures exhibited a steady growth. From the first year of Intermodal Surface Transportation Efficiency Act (ISTEA, 1992) to the final year of SAFETEA-LU

(2009), federal highway budget authorizations increased by 46 percent and the federal transit budget authorizations increased by 85 percent in 2008 dollars.

The HTF faces a near-term insolvency crisis, exacerbated by recent reductions in motor fuel tax revenues and truck-related user fee receipts. Comparing estimates of surface transportation investment needs with the revenue projections developed by the Commission, shows a federal highway and transit funding gap of nearly $400 billion in 2010-2015. This gap is projected to grow dramatically reaching $2.3 trillion by 2035. With the annual outlays increasingly exceeding the capacity of HTF, the Congress must decide either to ensure additional funding or to reduce federal highway and transit spending dramatically to levels that can be supported by current-law receipts.

The Commission reports, that since the Federal Highway Trust Fund was established in the late 1950s, real highway spending per mile traveled has fallen by almost 50 percent. Total combined highway and transit spending as a share of gross domestic product (GDP) has fallen by about 25 percent in the same period to 1.5 percent of GDP today. Because it is not adjusted to inflation, the federal gas tax has experienced a cumulative loss in purchasing power of 33 percent since 1993 - the last time the federal gas tax was increased. The current federal tax rates on motor fuels are 18.4 cents per gallon for gasoline and 24.4 cents per gallon for diesel. If the federal gas tax rate of 18.4 cents per gallon had been indexed using the Consumer Price Index beginning in 1993, the tax rate in 2008 would be 27.5 cents per gallon.

To address the federal funding shortfall, the federal tax rate on all motor fuels would need to be increased by 25-27 cents per gallon just to maintain the system. Funding the investment needed to improve the system would require a federal fuel tax increase of about 36-38 cents per gallon.

The Commission asserts that the problem is not simply insufficient investment, but rather a faulty pricing mechanism that makes nation's transportation system underpriced, causing overconsumption and shortages (manifested in the form of congestion). Too often the prices paid by transportation system users are even less than the cost of providing the transportation services (including pavement repair), and much less than the total social costs associated with their transportation mode (including traffic congestion and pollution). This underpayment contributes to less efficient use of the system, increased pavement damage, capacity shortages, and congestion.

The Commission identified and examined a full range of potential funding approaches to close the surface infrastructure investment gap. The funding mechanisms were

evaluated based on the identified criteria, including revenue potential, sustainability, flexibility, public acceptance, economic efficiency, equity, etc. The following funding options were considered by the Commission:

- Vehicle miles traveled (VMT) fee
- Automobile tire tax
- Motor fuel tax
- Carbon tax/cap and trade
- Customs duties
- Truck/trailer sales tax
- Vehicle registration fee
- Heavy vehicle use tax
- Container fee
- Tariff on imported oil
- Sales tax on motor fuels
- Truck tire tax
- Freight waybill tax
- Vehicle sales tax
- Harbor maintenance tax
- General fund transfer
- Freight ton-mile tax
- Driver's license surcharge
- Dedicated income tax
- Auto-related sales tax
- General sales tax
- Vehicle inspection and traffic citation surcharge
- Vehicle personal property tax
- Federal tax on local transit fares
- Federal tax on local parking fees, and others

Pros and cons for each option were reviewed, and each revenue option was given a weighted rating indicative of the option's overall consistency with the evaluation criteria. This rating was then used to classify the options as strong, moderate, weak or non applicable for the purposes of the analysis. The review of the options resulted in the recommendation to shift from the current infrastructure funding approach, based on motor fuel taxes, towards direct user charges that would be based on miles driven (VMT). The Commission believes that this new user fee-based funding approach will provide for a more efficient, more effective, and more sustainable surface transportation system.

Through its thorough investigation, the Commission made the following critical findings:

There is no easy "silver bullet" solution to the problem of insufficient funding. All the approaches reviewed by the Commission have their pros and cons and do not work equally well throughout the geographically and economically diverse country.

The current federal surface transportation funding structure that relies on vehicle fuels taxes is not sustainable in the long term and is likely to erode faster than previously thought. This can be attributed mostly to increased fuel efficiency, the development of alternative fuels, and new vehicle technologies.

The current indirect user fee system, based on taxing the consumption of motor fuels, provides users with only weak price signals and does not ensure the use of transportation system in the most efficient way. System users are typically unaware how much they are paying in fuel taxes (daily changes in gas prices mask the tax component built in the price of gas). Currently, fuel taxes and other direct and indirect user fees account for less than 60 percent of total system revenue (federal, state and local). Fuel taxes also do not have a direct link to specific parts of the system being used or the timing of the system usage.

The Commission endorses federal funding system based on more direct forms of user charges, in the form of charges for miles driven (VMT fee system), as a consensus choice for the future. The Commission believes, that the use of both broad-based VMT pricing systems and targeted tolling, may result in more efficient use of highway network and may assist with travel demand management by shifting demand to less congested periods of the day or to other modes.

While it may take some time to implement functioning VMT fee system, we cannot afford to wait for the new revenue system to be put in place to start addressing the fundamental investment challenge. Given the significant funding shortfall, the Commission concluded that the best short-term option for infrastructure investment is to increase the existing federal fuel taxes and other current HTF revenue sources.

Federal actions can help expand the options available to states and localities to fund their shares of investment. Federal actions could help facilitate and encourage greater participation or state and local governments in infrastructure investment (e.g., local matching of federal support).

Financing approaches – as distinct from revenue-raising mechanisms – are not a substitute for solving the problem of insufficient funding. Properly structured financing techniques and partnerships with private sector can play an important supplementary role. However, they success of the effort will depend on the ability to leverage new revenue streams to repay upfront capital investment.

The Commission realizes that the transition from the current funding model cannot be made overnight and that the immediate needs are too critical to wait until the new system is put in place. Therefore, the Commission made the following recommendations designed to meet both short-term and longer-term challenges:

Congress should continue the Highway Trust Fund mechanism and ensure its security and sustainability in the near and longer term.

Congress should immediately enact a 10 cent increase in the federal gasoline tax, and a 15 cent increase in the federal diesel tax, and similar increases in all special fuels taxes. The Commission recommends that these increases be implemented as a single step rather than in increments, given the magnitude of the immediate needs. The proposed 10 cent gas tax increase translates into ½ cent per mile, or $5 a month per vehicle, or $9 per month per household.

Congress should index all federal motor fuel taxes to inflation on an on-going basis.

Congress should double heavy vehicle use tax (HVUT) to account for the fact that it was not increased since 1983, and index HVUT and the excise tax on truck tires to inflation on an on-going basis. Meanwhile, maintain the current sales tax on tractors and trailers.

Congress should initiate the transition to a broad mileage-based direct user fee system (VMT system) as soon as possible and should establish 2020 as a target date for the implementation.

Once implemented, mileage-based user fees should be set to meet the designated share of national surface transportation investment needs and be indexed to inflation. The Commission estimates that to meet the base case "Need to Maintain and Improve" annual investment level ($96.2 billion in 2008 dollars), the federal VMT fee assessed on all miles driven, regardless of the system where they occur, needs to be approximately 2.3 cents per mile for cars and 13.2 cents per mile for heavy trucks (an average of $3.2 cents per mile for all vehicles). If the VMT charges were limited to miles driven on the federal-aid highway system, the approximate fees would have to be 2.7 cents per mile and 15.5 cents per mile for cars and heavy trucks respectively.

As the new mileage-based system is put in place, Congress should reduce and ultimately eliminate the current fuel and vehicle-related taxes as the primary mechanism for funding the surface transportation system.

Congress should give U.S. DOT the authority and mandate to develop standards for VMT pricing technology and require original equipment manufacturers to install that technology by a date that will accommodate 2020 target implementation date.

Congress should support and U.S. DOT should initiate extensive public outreach effort to foster broad understanding of the current funding problem, the proposed solution, and the intended method of implementation. The Commission recognizes

that a change as bold as a shift to VMT-based user charges will require a great deal of public discussion and learning.

Congress should expand the ability of states and local jurisdictions to impose tolls on the Interstate system by allowing tolling of net new capacity.

Congress should allow tolling of existing Interstate capacity in large metropolitan areas (of 1 million or more in population) for congestion relief.

Congress should continue the Interstate System Reconstruction and Rehabilitation Pilot Program (authorized in TEA-21 section 1216(b)), which allows tolling of existing Interstate System capacity for the purpose of reconstruction and rehabilitation and should expand it from three slots to five.

Congress should support standardization of tolling and information systems by completing necessary rulemaking regarding electronic tolling and interoperability.

Congress is recommended to reauthorize the federal credit program for surface transportation (originally authorized by Transportation Infrastructure Financing and Innovation Act of 1998) with a larger volume of credit capacity, broadened scope, and greater flexibility.

Congress is recommended to invest $500 million per year ($3 billion over six-year authorization period) to re-capitalize State Infrastructure Banks (SIBs), and should continue allowing states to use their federal program funds for this purpose as well.

Congress should take actions to facilitate and encourage private-sector financial participation where it can provide cost-effective and accelerated project delivery.

Congress should expand the highway/intermodal Private Activity Bond (PAB) program from current $15 billion national volume cap to $30 billion, and limit the use of the program to projects that create new capacity.

The Commission encourages Congress to consider authorizing the issuance of tax credit bonds for capital investments where the public benefits cannot be fully monetized by direct users and where traditional funding programs are inadequate.

The Commission report emphasizes that the transition from the fuel tax-based system to the VMT-based system undoubtedly will require a great deal of planning and public education. But that is no reason to delay initiating the transition. If we fail to address the immediate funding crisis and longer-term investment challenges

facing the nation's surface transportation system, we will suffer grim consequences in the future in the form of unimaginable levels of congestion, reduced safety, higher costs of goods and services, an eroded quality of life, and diminished economic competitiveness as a nation.

Summary of Bipartisan Policy Center Report - Performance Driven: A New Vision for U.S. Transportation Policy

Under the National Transportation Policy Project (NTTP), in July 2009, the Bipartisan Policy Center published a report summarizing findings of a conference on performance-based federal surface transportation policy. The report highlights five key goals critical to maintaining and improving the nation's transportation infrastructure. :

1. Economic Growth
2. National Connectivity
3. Metropolitan Accessibility
4. Energy Security and Environmental Protection
5. Safety

These goals require a shift to a system that is based on public investment return optimization rather than a system based on revenue sharing.

To accomplish these goals, NTTP recommended a new structure that consolidates all current federal transportation programs into two categories: formula-based system preservation programs and competitive capacity expansion programs. This consolidation would reduce the number of programs from approximately 108 to six. Under the preservation programs,

Revenue and Performance

The NTTP report also recognizes that the decline in gasoline consumption and changes in fuel efficiency technology will result in a decline in revenue requiring a shift from a fuel tax-based revenues to new revenue sources.

The report does not subscribe to the official view of an optimal level of investment to cover current and future needs. There are too many factors that affect the performance of a system and the need for capacity, making any interpretation of the term "need" itself relative and shifting. Accordingly, the focus should be on maximizing valuable investments where the returns to society are measured and optimized. An equally fundamental concern is that existing revenue mechanisms fail to take advantage of the

fact that the performance of the transportation system can be directly influenced by how users pay for it.

Thus, the NTPP report recommends that future efforts to address the need for new transportation revenue-raising mechanisms should be user-fee based. Revenues should be user-based and applied to performance-based programs. Furthermore, the report recommends the development of a mode-neutral freight fee to fund the needed new focus on critical freight infrastructure

Also, new climate policies and transportation legislation need to assure that transportation users cover the full costs of their carbon emissions – and that carbon pricing revenue support investments to significantly reduce carbon emissions.

Finally, the report recommends that federal policies and funding should assist states and local governments in developing sustainable funding sources, including eliminating federal restrictions on road pricing, supporting efforts by states to implement direct user charges, and expanding Transportation Infrastructure Finance and Innovation (TIFIA) credit support.

Summary of Infrastructure 2010: Investment Imperative, Urban Land Institute (ULI), 2010 Report

Since 2007, the Urban Land Institute (ULI) has issued an annual report focused on the state of America's infrastructure systems – transportation, water, dams, and power. The Urban Land Institute's 2010 publication, entitled *Infrastructure 2010: Investment Imperative* focused on the necessity to treat infrastructure as investment. Underinvestment in critical infrastructure systems over the past 30 years and substantial public and private debt have stalled the nation's ability to meet this challenge. With projections of population growth to 20 million people by 2010, America must bolster its economic gateway cities and metropolitan regions, which produce an estimated 90 percent of national GDP. Rather than treating infrastructure as investment, "spending is funneled through siloed formulas, sidestepping critical questions about the county's longer-term infrastructure strategy and vision." To ensure future prosperity and world economic standing, housing, transportation, water, and energy must be comprehensively integrated with land use in a strategic way.

America has become a metropolitan nation where traditional detached-house subdivisions have morphed into more urban environments. There is fill-in of the dense development between original downtown cores and edge cities in Atlanta and Houston.

Suburban fringes spread beyond Boston, New York, and Washington, D.C., creating extremely large and populous cities. Southern Florida and southern California have expansive regions of interconnected subdivisions and urban centers. "This varied metropolitan landscape has engendered a free-form, car dependent pattern, heavily subsidized for decades by federal highway and water system funding and later fueled by easy credit in mortgage markets. Left in the wake of ongoing transformation and change is a slew on unsustainable costs and inefficiencies," including aging and inadequate water and sewer systems, increasing water costs, expensive road and bridge repairs, higher driving expenditures, and escalating homeowner budgets.

ULI detailed the impact of overlapping taxes for basic services resulting from multilayered government in a metropolitan sprawl environment. "Competing jurisdictions in turn rob each other for precious tax base (typically shopping centers and retailers), destabilizing neighborhoods and commercial districts when businesses move out for better deals," perpetuating inefficient bureaucracy and impeding regional planning for delivering infrastructure and related services. Aging and inadequate water and sewer systems at the end of their life cycles require considerable investment. According to ULI, twenty percent of the nation's water treatment systems currently fail water drinking standards, and the price tag for water infrastructure alone is estimated to be $10 billion to $20 billion per year over the next 20 years.

Americans are facing higher driving expenditures and escalating homeowner budgets as government struggles with "whether and how to pay for necessary massive infrastructure improvements of aging bridges and roads at a time when the public calls for belt-tightening." Americans spend $2.7 billion a day on their cars as they become more car dependent in light of limited mass transit options. Higher driving expenses for vehicle maintenance costs combined with time lost in congestion serve to "shift the cost equation in favor of living closer to work and embracing mass transit alternatives where available." As utility, water, and tax bills increase to new levels, "U.S. homeownership rates could drop from nearly 70 percent, their 2007 peak, to close to 60 percent by the end of the decade." Officials continue to resist "linking costs for infrastructure development and maintenance directly to funding mechanisms like tolls and fees" despite potential reduced costs and enhanced efficiencies. Even with the decline of the National Highway Trust Fund, the federal gas tax remains at the rate established in 1993.

Some signs of progress highlighted in the report include:

- Recognition of Europe's success in financing large-scale projects through an infrastructure bank
- Approval of $8 billion in 2009 stimulus dollars for initial funding of regional high-speed rail lines represents the start of an important passenger rail initiative and an expansion of merit-based grant programs
- Local leaders promote integrated transit and road networks that encourage regional economic growth and help reduce traffic delays, and voters increasingly approve transit-specific referendums, involving dedicated tax increases
- Nonprofit groups have become more vocal and advocate for infrastructure funding, reforming national policy, and educating the media and public about actual costs of maintaining necessary infrastructure

ULI noted that on top of contentious budget issues,

> "Virtually no official wants to confront the dislocation involved in building new infrastructure corridors for rail, transit, and power lines through existing neighborhoods in major metropolitan areas. It was relatively easy to bulldoze the interstates through mostly greenfields back in the 1950s and early 1960s. But retrofitting built-out metropolises to accommodate new mass transit and passenger rail routes or power grids from solar and wind fields will mean scarring some areas and choosing winners over losers. Investments that are needed for the great good can easily be mired in costly litigation delays over eminent domain and property rights."

Infrastructure 2009: Pivot Point included a scorecard to evaluate how the U.S. government is addressing the country's infrastructure needs. Following are the primary recommendations in 2009 along with the status of those recommendations in 2010:

Focus stimulus funds into refurbishment and repairs – strong fix-it first focus
The American Recovery and Reinvestment Act (ARRA), the 2009 federal stimulus bill "focused on creating jobs and priming a sick economy, boosting badly needed fix-it-first projects – potholed roads, corroding bridges, and broken sewer pumps." Funds were generally allocated through existing federal programs, and about $132 billion of the original $787 billion in stimulus headed into infrastructure. While some holes were plugged and backlogged projects moved forward, minimal long-term impact was noted.

Increase revenue by beginning to raise the gas tax and allow more tolling – no progress

Efforts to raise gas taxes or impose new user fees like tolls and mileage charges were thwarted by the realities of recession, and stimulus funding was not able to nullify an insolvent Highway Trust Fund, which serves as the primary revenue source for transportation upgrades.

Appoint a diverse national commission to formulate a long-term national infrastructure strategy – initiating dialogue

The Obama administration initiated a "national dialogue on the links between state-of-the-art infrastructure and the nation's future economic health – high-lighting the benefits of high-speed rail and power grids for clean energy sources." There was some focus on integrating goals for economic competitiveness, livability, and sustainability into requests for federal transportation funding on the part of state and local governments.

Integrate federal policy, linking transport policy to energy, environment, housing, and land use initiatives – some positives

Through the Partnership for Sustainable Communities announced in June 2009, the secretaries of key federal agencies – HUD, EPA, and DOT – formally agreed to work together and take a more thoughtful approach on initiatives involving sustainable communities and economic productivity. Specific plans and programs developed by the agencies to increase coordination and strategic reinforcement of objectives could "portend the beginning of silo busting, knocking down hurdles that prevent integrated regional land use planning."

Create a national infrastructure bank as a true, merit-based underwriting institution - stalled

Only a few leaders have supported creation of a national infrastructure bank to encourage private capital to invest alongside public funds on large-scale projects like high-speed rail, new seaports and airports, or electric grid corridors.

Pass new federal surface transportation legislation that is more integrated and multimodal, and that shifts funding from formula to merit – gridlocked

With attention focused on jobs, wars, deficits, health care, and homeland security, Congress has relegated infrastructure reform and transportation funding to a lower rung on the list of priorities. The bleak economic outlook will likely stall meaningful financial reform.

THE LONG ROAD BACK – a roadmap to meet the challenges ahead

Provide straight talk – educate the public about the consequences of inaction and the need to establish national priorities to ensure a sustainable future

Rebuild America – identify and fund game-changing, multimodal infrastructure projects to help ensure future economic productivity while creating jobs

Determine a Vision for Connecting America's Metro Areas – develop an integrated strategy for revamping inter-metropolitan transportation networks, connecting the nation's gateway cities and metropolitan areas, and incorporating regional housing, energy, and water needs

Reform Federal Transportation Programs – transportation policy should shift funding from formulas and use a competitive, merit-based process for allocating more transportation dollars. Provide **base funding** for localities to repair and maintain infrastructure, **bonus grants** for communities that meet guidelines for integrating infrastructure planning with housing and regional economic development, and national infrastructure **bank** loans to attract private sector involvement and finance projects of national or regional scope is needed.

Buttress Economic Gateways and Metropolitan Areas – focus priorities on initiatives that serve the most people and have the greatest impact on national economic growth. Strengthen the nation's large metropolitan areas and connect the gateway cities to key regional commercial centers to support their growth.

Reconfigure Urbanizing Suburban Centers – refashion into multifaceted 24-hour communities, including apartments, retail, office building, and parks, that can support more dense residential development and surrounding single-family neighborhoods. Mass transit networks – including subways, light-rail systems, and bus rapid transit – should connect them to primary business districts and intercity transport terminals for airports and high-speed rail.

Establish a National Infrastructure Bank – look at Europe's success. The European Investment Bank (EIB) was established in 1958 and currently finances $64 billion in projects annually across the continent, helping modernize seaports, expand airports, build rail lines, and reconfigure city centers. Few EIB projects have ever defaulted – borrowers repay EIB loans, allowing the bank to continually relend the money. "Following the EIB modal, a U.S. entity could carefully underwrite long-term loans (up to 40 or 50 years) and base decisions on a competitive, merit-based process. Private

capital will almost surely follow infrastructure bank investments, jump-starting more public/private partnerships and augmenting funding sources."

Pay Differently – develop a user-based payment scheme to align costs with use, which will, ultimately, alter behavior to gain efficiencies. "Technologically feasible mileage fees, new toll systems, and congestion charges can tie vehicle use more directly to road maintenance and inform decisions about where and when to drive." The same is true with water use. User-based funding schemes could "lower general tax rates, pay for systems, and reduce overall burdens on those taxpayers who make more efficient lifestyle and business decisions, and could also help attract private capital to finance needed projects."

Celebrate Progress – communities must acknowledge projects that are doing well and establish future targets as measures of success in preserving their legacy.

Water Woes

A major portion of ULI's 2010 report focused on the issue of water. Water costs continue to climb as availability declines in the face of climate change, frequent droughts, and increased demand from a growing population.

Priorities for managing supply and demand include the following:

1. Repairing leaks and modernizing aging systems (leaks account for 13.7 percent of average daily water use per capita/9.5 of 69 gallons in the U.S. and 1.25 trillion gallons annually)
2. Developing regional strategies to protect supplies and plan for increasing population demand
3. Planting crops that require less water
4. Implementing new irrigation methods
5. Using new recycling technologies
6. Capturing and controlling more groundwater
7. Landscaping with appropriate native species
8. Encouraging conservation and greater efficiencies
9. Charging users full costs for system maintenance and capital improvements

Americans use significantly more water per capita than residents of other countries – "the average global citizen's water footprint computes to approximately 330,000 gallons

annually – about half the average American's, at close to 660,000 gallons. In China, the average citizen uses only about 185,000 gallons each year."

Total water withdrawals grew steadily between 1950 and 1980 and then began to level off as the result of decreased manufacturing, more efficient manufacturing technologies at remaining factories, and better irrigation for farming. Despite a decline in the nation's use of water from decreased manufacturing and enhanced technologies, from 1950 to 2005 a doubling in population grew water use to more than 400 billion gallons a day.

> "Make no mistake: confronting water issues will require massive investment and integrated regional planning with other land use concerns, including housing, transportation, power sources, and farming."

Water Solutions

The new water management model will require innovation, holistic approaches, conservation, and regional collaboration, taking into account land use strategies and energy demands. Wastewater and stormwater schemes will become integral to sustaining water supplies, utilizing improved landscape designs, recycling systems, and irrigation technologies. Everyone must prepare to pay more and use water more efficiently to ensure availability. Following is a roadmap for getting on the right track:

1. Get Governments' Act Together – condition federal money on states' developing long-range regional water management programs that integrate water supply and conservation strategies with population projections, agricultural needs, and utility demand.
2. Embrace Collaboration – broad collaboration among agencies, regions, and communities
3. Face Reality – ratepayers and taxpayers pay more to ensure reliable and safe supplies
4. Fix It First – repair leaks and upgrade existing systems
5. Integrate Land Use Into Water Management – restrict development in areas without ample future water resources; in arid zones, developers need to incorporate water recapture (cisterns) and recycling (graywater) systems for irrigation into plans and designs; limit impervious pavement and use various low-impact development strategies
6. Protect Ecosystems – allow natural flood plains and watersheds husband water and restore sources

7. Think Comprehensively – move beyond dependence on pulling water out of rivers, lakes, and aquifers by collecting and using all available water resources – capture rainwater off roofs and pavement, recycle wastewater, recharge groundwater, and make non-potable water potable
8. Reduce Agricultural Demand – incentivize farmers to reduce water use either by not cultivating water-intensive crops or adopting more sophisticated irrigation techniques, which limit water use
9. Moderate Household Consumption - install double-flush toilets and air-injected showerheads, fix leaks, and use washing machines and dishwashers more efficiently; water lawns less frequently and conserve electricity; and, re-landscape yards with drought-resistant turf in arid regions
10. Encourage Conservation and Raise Rates – raise rates to get people's attention about conservation and to help fund necessary repairs and upgrades; incorporate smart water meters to encourage behavior modification to reduce bills; and, adjust rates to water availability and time of day
11. What about Desalinization? - limited success in other countries has not been replicated in the U.S.; plants are costly, energy intensive, and indirectly use significant water resources for utility generation; and, disposal of brine is a problem that has not been solved

Paying the Way

The 2009 recovery bill will inject more than $60 billion of federal funding into transportation and water-related projects, not nearly enough to address the country's enormous five-year gap in infrastructure funding, estimated at more than $1.1 trillion by the American Society of Engineers. The path forward includes the following components.

1. Move toward Merit

Use ***base*** funds for system maintenance, ***bonus*** or discretionary grant funds for capacity expansions, and a new national infrastructure ***bank*** to make investment-grade decisions about infrastructure projects. A number of programs created and funded by ARRA dollars show some silo-busting promise, and TIGER grants ($1.5 billion granted versus $57 billion requested) , high-speed rail ($8 billion in ARRA versus $50 billion requested), and others shifted away from formulas to competitive, merit-based grants that encouraged innovation and collaboration. USDOT's assessment and award processes for these programs can provide a new framework for making better decisions about where and how to invest major transportation dollars.

2. Closing the Resource/Need Gap

Despite the use of stimulus money to help fill gaps in state budgets, large state and local government deficits and existing debt burdens will necessitate spending cuts to balance budgets in the absence of an economic rebound. Transit agencies in many cities have cut schedules, closed routes, furloughed employees, and raised fares (up 17% at an annual rate in the last six months of 2009, according to the National Bureau of Labor Statistics). As fares increase, ridership falls (down nearly 4% in 2009) and decreases system revenues further, creating more budget shortfalls. Compromised revenue sources constrain state and local transportation departments and water and sewer authorities. Increases in rates to pay for repairs and maintenance are insufficient to cover the cost of necessary upgrades.

3. The Future: More User Fees

Increased user fees will likely pay for infrastructure of all types over the next decade. Elected officials must realize that the user fee approach (commonly used by toll roads) can effectively and fairly raise money to fill the widening funding gap and help to modify behaviors, which can improve productivity and eventually reduce overall costs to the economy. Existing rate systems allow water and sewer authorities to raise rates and pay for repairs too, although most users resist major increases that could pay for major capital projects. "People have to start looking at water rates and tolls not as a tax, but as a fee for service and maintaining necessary systems." People are more accepting of tolls for new roads or congestion pricing than new tolls on existing highways, and they reject "expensive-sounding vehicle mileage fees, "which could charge for driving anywhere at any time.

4. Vehicle Miles Traveled Tax

A straightforward system that charges drivers for vehicle miles traveled is preferable to the unpopular fuel tax, which will not raise enough money unless it is hiked substantially, because many new vehicles use less fuel. ***The more you drive and the more you contribute to congestion, the more you pay.*** Existing GPS and transponder technologies can be applied to compute mileage traveled as well as account for driving in rush hour congestions, HOT lane use, and bridge-tunnel fares. Heavy vehicles, gas guzzlers, and trucks would be charged more based on higher emissions and greater road wear and tear. Insurance rates can be linked more directly to mileage. User fees would reduce significantly or eliminate government reliance on general taxes (income, sales, and property) for roads and mass transit. Over time, people should pay less in

total taxes and fees if they adopt lifestyles that involve less driving. Distance and time-of-day charges could make sense for public transit, as well.

5. Smart Meters

Like mileage-based fees for driving, smart metering for electricity and water can help rate payers understand charges and encourage more efficient habits, which translate into smaller bills and less energy consumption. Smart electric meters show homeowners real-time billing costs and allow electric companies to adjust thermostats remotely to avoid brownouts. Smart water meters have the potential to enable greater conservation, especially in supply-constrained areas. The meters can help detect leaks and charge more for inefficient use

6. Public/Private Partnerships

Although public/private partnerships (PPPs) have gained traction in Europe, Canada, and Australia, acceptance by U.S. state and local governments has been more problematic and spotty. Foreign capital has been discouraged by the falling dollar, increasing government debt loads, and prospects for higher interest rates.

Nevertheless, several high-profile, "first of their kind" PPPs in Florida, Texas, and Virginia, closed during the year and construction for another project is well underway. Public/private partnerships don't really change the cost equation for infrastructure – in the end, taxpayers and/or ratepayers must pay for building and maintaining systems. But if properly structured, PPPs can provide some advantages: bring projects online faster (often at half the time of usual delivery methods), attract investor capital to finance infrastructure projects, manage systems more efficiently, and employ innovative operating technologies faster than government agencies. "Private investors and operators covet prime infrastructure monopolies – key bridge or highways, primary airports and seaports, water districts – where competition doesn't threaten to undercut rate structures and facility demand ensures high volumes of users.

The heavy lift – managing and integrating land use, housing, transportation, water, and energy issues – remains very much in government's court. Water offers a largely unexploited opportunity for public/private partnerships in the U.S., since rate paying formats exist and facilities badly need capital infusions for system upgrades."

7. Why Not an Infrastructure Bank?

PPP structures could benefit from the creation of a U.S. national infrastructure bank, which would draw more private equity and debt capital into infrastructure development and help establish voluntary, uniform frameworks across states for PPP

structures. Ad hoc state approaches for soliciting PPP proposals have lead to uncertainty. A federal infrastructure bank could help establish procurement protocols and standards, facilitating the bidding process. If patterned on the European Investment Bank model, a U.S. version could "bring stability and long-term capital (15 to 25-year loans at low rates) to projects that require both, and equity investors and commercial lenders can get more comfortable before they dive in." The vetting process would also help introduce merit-based, competitive decision-making and provide a mechanism for funding major, cross-sector and multijurisdictional projects. ***But a U.S. infrastructure bank would be no silver bullet – in the end, infrastructure loans must be secured by some revenue stream – tolls, fees, increased rates, or taxes.***

8. Private Infrastructure Investment Funds

Global economic turmoil negatively impacted global infrastructure investment funds. Heavily leveraged funds that overpaid for asset concessions took "heavy" write downs, and some late on the scene investment managers dropped plans to raise capital and abandoned the market. Declining user fees caused a fall in revenue at seaports, airports, and railroads as traffic plunged 30 to 40 percent in some markets. Toll roads suffered revenue erosion too as drivers cut back trips. Water districts and regulated utility assets fared best, securing risk premiums for more predictable cash flows. "Nonetheless, for institutional investors looking for predictable, long-term income streams, infrastructure investments in established concessions can beat risk/return prospects in the battered commercial real estate sector."

Highway and Transit Needs in Florida

MPOAC/FDOT Studies - 1997 – 2008

June 1997 Summary of Findings

A review of the financial shortfalls of Florida MPO long-range transportation plans (LRTP) was conducted in June 1997 by the Center for Urban Transportation Research (CUTR).

Federal and state legislative mandates require that each MPO develop a long-range transportation plan (LRTP) and complete an update of the LRTP for air quality nonattainment or maintenance areas every three years or for areas of air quality attainment every five years. Federal mandates further specify the development of a cost-feasible transportation plan on the part of the MPO.

Most of the 25 MPOs updated plans to comply with FHWA December 1995 update. Each plan reported that available and projected total funds (i.e., federal, state, local, private) fell short of the estimated total cost of implementing the projects identified by the needs assessment.

The study reviewed all 25 LRTPs to estimate cumulative statewide funding shortfall for the urban areas of Florida within the MPO planning boundaries. Adjustments were made to compare the financial information that account for several inconsistencies in the way data were reported. Since differing plan horizon years (2015 and 2020) were represented, 2015 total cost estimates and revenue projections were factored up by 1.33 to represent a year 2020 comparison; total costs and revenues for each 2020 horizon year were factored down by 0.75 to represent a year 2015 comparison. Cost and revenue figures were adjusted to represent 1995 dollars to account for differing base year dollars of cost estimates and revenue projections. The results of the analysis produced an overall shortfall of $22 billion and are presented in Table 3.

Cost and revenue information were presented in many differing formats. Specific differences were noted in the treatment of operations and maintenance costs and revenues and in the general categorization of improvement costs and revenues. It was noted that future cumulative financial shortfall analyses could be enhanced and could provide valuable information if LRPT updates were developed in anticipation of such a cumulative needs assessment and in consideration of some general reporting

guidelines. Perhaps the most valuable information would be a breakdown of the cumulative financial shortfall by responsible agency and by system type.

Table 3 MPO Long-range Transportation Plan Shortfall, June 1997

				Year 2020 Needs (in millions)				
Metropolitan Planning Organization	*FDOT District*	*LRTP Horizon*	*Scheduled Update*	*Total Revenues*	*Needs*	*Financial Shortfall*	*Shortfall by District*	*Shortfall % /Total*
Charlotte County-Punta Gorda	1	2020	2001	$ 214.7	$ 400.0	$ 185.3		
Lee County	1	2020	2001	$ 1,140.2	$ 1,486.1	$ 345.9		
Naples (Collier County)	1	2020	2001	$ 582.3	$ 1,230.0	$ 647.7		
Polk County	1	2020	2001	$ 788.6	$ 1,373.0	$ 584.4		
Sarasota/Manatee County	1	2020	2001	$ 946.2	$ 2,013.3	$ 1,067.1	$ 2,830.4	12.7%
Jacksonville Urban Area[1]	2	2015	1999	$ 842.9	$ 2,400.0	$ 1,557.1		
Gainesville Urbanized Area[2]	2	2020	2001	$ 89.0	$ 183.6	$ 94.6	$ 1,651.7	7.4%
Fort Walton Beach Urbanized Area[1]	3	2015	1999	$ 54.4	$ 592.6	$ 538.2		
Panama City Urbanized Area	3	2020	2001	$ 89.7	$ 705.0	$ 615.3		
Pensacola Urbanized Area	3	2020	2001	$ 620.8	$ 1,124.8	$ 504.0		
Tallahassee/Leon County	3	2020	2001	$ 428.0	$ 1,029.5	$ 601.5	$ 2,259.0	10.1%
Broward County[1]	4	2015	1999	$ 2,835.7	$ 5,302.0	$ 2,466.3		
Palm Beach County	4	2015	1999	$ 2,365.2	$ 2,409.3	$ 44.1		
Indian River County[2]	4	2020	2001	$ 123.9	$ 172.5	$ 48.6		
Martin County[2]	4	2020	2001	$ 217.6	$ 217.6	$ -		
St. Lucie County[2]	4	2020	2001	$ 124.4	$ 168.1	$ 43.7	$ 2,602.7	11.7%
Brevard Urban Area[2]	5	2020	2001	$ 732.2	$ 897.9	$ 165.7		
Ocala/Marion County	5	2020	2001	$ 834.6	$ 1,296.2	$ 461.6		
Orlando Urban Area[2]	5	2020	2001	$ 4,767.1	$ 6,606.1	$ 1,839.0		
Volusia County	5	2020	2001	$ 1,072.5	$ 1,271.5	$ 199.0	$ 2,665.3	11.9%
Miami Urbanized Area[1]	6	2015	1999	$ 12,137.6	$ 18,559.2	$ 6,421.6	$ 6,421.6	28.8%
Hillsborough County[1]	7	2015	1999	$ 7,595.5	$ 9,812.3	$ 2,216.8		
Pasco County[1]	7	2015	1999	$ 884.5	$ 1,538.7	$ 654.2		
Pinellas County[1]	7	2015	1999	$ 1,916.1	$ 2,751.3	$ 835.2		
Spring Hill/Hernando County[1]	7	2015	1999	$ 314.4	$ 501.0	$ 186.6	$ 3,892.8	17.4%
				$ 41,718.1	$ 64,041.6	$ 22,323.5	$ 22,323.5	100.0%

[1] *Year 2015 Needs projected to Year 2020*

[2] *Adjusted to 1995 dollars*

Source: Review of Florida MPO Long-range Transportation Plans, CUTR, June 1997

To address the shortfall, MPOs and state and local governments must work together to identify additional state and local sources of revenue, including further use of the local option gas tax, and at the federal level, work together to rectify Florida's status as a transportation fund donor state. Florida currently receives much less than one dollar of federal funding for each dollar it collects in federal gas taxes.

August 1997 Summary of Findings

In August 1997, CUTR completed a comparative study of the policy direction of the 2020 Florida Transportation Plan and the long-range transportation plans of Florida's 25 MPOs.

The study was necessary to implement an important element of the MPOAC Strategic Plan, which established that it would, *"by the end of 1997, prepare in cooperation with FDOT, a compilation of MPO goals and objectives that can assist in reconciling MPO long-range plans and the 2020 Florida Transportation Plan, to ensure that transportation plans of the State and MPO are mutually supportive."*

The four primary objectives of the study are as follows:

- Develop a narrative overview of the issues and policies contained in each of the MPO long-range transportation plans, distinguishing between large and small metropolitan areas
- Review these issues with respect to their degree of inclusion in the 2020 Florida Transportation Plan (FTP)
- Assess the degree of connectivity among projects in adjacent metropolitan areas, focusing specifically on the Florida Intrastate Highway System
- Develop an overall "Metropolitan Area Trends and Conditions Report" that addresses demographic and transportation data reflective of Florida's 25 metropolitan areas

Highlights, reflective of generalized practices and concerns:

Funding shortfalls – Without exception, a funding shortfall was the most significant issue facing each of the MPOs in Florida.

Innovative financing strategies – The challenge to identify and implement innovative strategies for generating revenue was another issue common to most MPOs; public opposition to increasing taxes was common among urbanized regions.

Funding uncertainty – Uncertainty of state and local funding sources made it difficult for many of the urbanized regions to develop reasonable funding projections to a 20-year horizon.

Public involvement – In many instances, MPOs described the challenge of generating public interest in the long-range plan-development process; individual projects tended to arouse greater interest among those who would be most affected by the project.

Mobility/livability balance – An issue in many of the metropolitan areas was the effect of roadway projects on livability and sustainable development objectives; changing community values have shifted to strongly emphasize the preservation of residential neighborhoods.

Environmental and air quality concerns – Many of the MPOs have elevated projects that help improve environmental quality; some are still facing challenges in meeting air quality standards and are concerned about their ability to comply with new national air quality standards.

Issues identified in the 25 MPOs long-range plans:

Incorporation of the ISTEA planning factors – Many of the MPOs have been making great strides in addressing and considering these factors in their long-range plan development; in others, it was unclear how these factors translated into specific projects in the cost-feasible plans.

Consideration of alternative land use scenarios – Most MPOs relied on standard transportation modeling to determine future system needs, as opposed to considering various land use adjustments; one region examined three different land use strategies to their plan development, to examine the relationship between alternative land use strategies and transportation needs.

Project selection criteria – Increased authority under ISTEA enabled MPOs to influence which projects were selected for inclusion in the cost-feasible plans; most MPOs identified new project selection criteria to distinguish among priorities.

Regional and intergovernmental coordination – There are many instances of positive intergovernmental coordination among adjacent urbanized areas in Florida – coordinated major investment studies and hurricane evacuation projects, for example.

Florida Intrastate Highway System – Most of the MPOs in Florida gave thorough consideration to improvements on the FIHS; however, many of the improvements in the MPO cost-feasible plans varied with respect to degree of funding and scheduling of the improvement, relative to the state's FIHS plans.

Shortfalls identified in August 1997 are presented in Table 4.

Table 4 MPO Long-range Transportation Plan Shortfall, August 1997

MPO	FDOT District	LRTP Horizon	Scheduled Update	August 1997 LRTP (in millions) Total Revenues	Needs	Financial Shortfall	Shortfall by District	Shortfall %/ Total
Charlotte County-Punta Gorda	1	2020	2001	$ 214.7	$ 400.0	$ (185.3)		
Lee County	1	2020	2001	$ 940.8	$ 1,486.1	$ (545.3)		
Naples (Collier County)	1	2020	2001	$ 582.3	$ 1,230.0	$ (647.7)		
Polk County	1	2020	2001	$ 788.6	$ 1,277.6	$ (489.0)		
Sarasota/Manatee County	1	2020	2001	$ 946.2	$ 2,013.3	$ (1,067.1)	$ (2,934.4)	15.4%
Jacksonville Urban Area	2	2015	1999	$ 842.9	$ 2,400.0	$ (1,557.1)		
Gainesville Urbanized Area	2	2020	2001	$ 83.0	$ 172.0	$ (89.0)	$ (1,646.1)	8.6%
Fort Walton Beach Urbanized Area	3	2015	1999	$ 57.5	$ 426.8	$ (369.3)		
Panama City Urbanized Area	3	2020	2001	$ 89.7	$ 705.0	$ (615.3)		
Pensacola Urbanized Area	3	2020	2001	$ 620.8	$ 1,124.8	$ (504.0)		
Tallahassee/Leon County	3	2020	2001	$ 332.2	$ 1,029.5	$ (697.3)	$ (2,185.8)	11.5%
Broward County	4	2015	1999	$ 2,070.0	$ 3,870.4	$ (1,800.4)		
Palm Beach County	4	2015	1999	$ 2,365.2	$ 2,409.3	$ (44.1)		
Indian River County	4	2020	2001	$ 132.0	$ 136.0	$ (4.0)		
Martin County	4	2020	2001	$ 199.6	$ 199.6	$ -		
St. Lucie County	4	2020	2001	$ 120.8	$ 163.2	$ (42.4)	$ (1,890.9)	9.9%
Brevard Urban Area	5	2020	2001	$ 684.3	$ 839.2	$ (154.9)		
Ocala/Marion County	5	2020	2001	$ 834.6	$ 1,296.2	$ (461.6)		
Orlando Urban Area	5	2020	2001	$ 4,864.4	$ 6,740.9	$ (1,876.5)		
Volusia County	5	2020	2001	$ 1,072.5	$ 1,271.5	$ (199.0)	$ (2,692.0)	14.1%
Miami Urbanized Area	6	2015	1999	$ 9,126.0	$ 13,954.3	$ (4,828.3)	$ (4,828.3)	25.4%
Hillsborough County	7	2015	1999	$ 5,710.9	$ 7,377.7	$ (1,666.8)		
Pasco County	7	2015	1999	$ 621.5	$ 1,081.2	$ (459.7)		
Pinellas County	7	2015	1999	$ 1,398.7	$ 2,008.4	$ (609.7)		
Spring Hill/Hernando County	7	2015	1999	$ 220.9	$ 352.0	$ (131.1)	$ (2,867.3)	15.1%
				$ 34,920.1	$ 53,964.9	$ (19,044.8)	$ (19,044.8)	100.0%

Source: Review of Florida MPO Long-range Transportation Plans, CUTR, August 1997

Future Considerations

1. Incorporate current issues and problems into the long-range plans
2. Incorporate a strong visioning process - begin by articulating a strategic vision
3. Incorporate principles of strategic planning into the long-range transportation planning process
4. Recognize the interaction between transportation and land use, with alternative land use scenarios
5. Place greater emphasis on difficult policy tradeoffs and less reliance on transportation planning models
6. Include standard reporting for certain performance measures - total number of lane miles at various levels-of-service or average network speeds
7. Include a systematic assessment of safety considerations in plan development
8. Include systematic consideration of hurricane evacuation in the development of long-range plans

9. Standardize the timing of plan updates throughout the metropolitan regions
10. Standardize the reporting of estimated costs and projected revenues
11. Report financial information by responsible agency and facility type

August 2002 Summary of Findings

In 2002, CUTR was asked to re-evaluate 25 MPO LRTPs. Each MPO had completed at least one update cycle since the initial 1997 review. Federal transportation legislation added a few new emphasis areas for LRTPs and provided slightly different guidance to direct the long-range transportation planning process. CUTR was asked to pay particular attention to methods used to establish project priorities, identify needs, and move projects from needs plans to cost-feasible plans.

Long-Range Transportation Plans

Quality of plans improved significantly - plan documents were more user friendly and concise, contained less jargon and richer descriptions of issues and challenges, relied more on modeling, included a wider range of planning considerations than roadway level-of-service deficiency, and provided numerous examples of innovative public involvement efforts and improved regional and interagency coordination.

There was an increase in the consideration of potential social and community impacts in the decision-making process and thoughtful inclusion of community concerns into the decision-making process.

A variety of methods were used to select projects for the cost feasible plan:

- Use of a weighted prioritization formula was the most popular
- Most plans incorporated the concepts of multimodalism and intermodalism, including such alternative strategies as ITS, corridor management, and TDM

Financial Shortfall

Financial shortfalls between the costs of identified needs and reasonably available revenues remained a significant and widespread phenomenon – when combined, **the statewide 20-year shortfall estimate was $37.7 billion** (in year 2000 dollars) – a 43 percent increase over the 1997 statewide shortfall estimate

Specific observations

- In general, plan documents were better organized, more user friendly, and significantly more descriptive

- Public involvement approaches improved dramatically throughout the state
- Many did not integrate a strong visioning process and/or principles of strategic planning
- Most included goals dealing with safety and economic competitiveness, but few systematically considered these issues
- Alternative land use scenarios were rarely considered
- The final list of cost-feasible projects was not always clearly linked to identified goals, objectives, and policies
- There was no statewide consistency in how needs and expected revenues were identified, what the composition of these estimates should be or how this financial information was reported
- Several MPOs staged the implementation of projects included in their cost-feasible plan, but few identified a specific mechanism for project programming on their LRTP
- A large shortfall between revenues and needs plan costs remains a significant and widespread phenomenon

August 2005 Summary of Findings

In August 2005, the Florida Department of Transportation (FDOT) was in the process of updating the Florida Transportation Plan (FTP). Federal planning codes and regulations (23 USC 135(b) and 35 CFR 450.214(b)(4)) require that statewide planning be coordinated with MPO planning activities and plans. FDOT requested assistance from CUTR to:

- Review and summarize Florida MPO long-range transportation plan (LRTP) goals, objectives and planning priorities
- Assess the status of regional transportation planning products
- Document the research method used in 2002 to prepare the 20-year statewide transportation shortfall and discuss the practicality and validity of extrapolating that financial shortfall estimate using data from a small sample of MPOs

MPO Planning Priorities

CUTR reviewed 20 of 26 MPO LRTPs to identify the key transportation planning priorities of Florida's MPOs. Most recently updated LRTPs were selected. Various policy statements (goals, objectives and other policy statements) from individual MPO LRTPs were translated into generalized goal statements that described key

transportation planning priorities representing the most frequently stated priorities of individual MPOs. The following generalized goal statements were produced. The percentage of MPO LRTPs that have goals, objectives and/or policy statements is indicated following the goal statement.

Generalized Goal Statements (% of MPOs reflecting generalized statement, 20 of 26 MPO LRTPs were reviewed)

1. Enhance transportation system safety (20/20 - 100%)
2. Make modal alternatives more viable through increased availability, improved service and additional funding (20/20 - 100%)
3. Promote economic vitality by focusing on mobility to, between, and within major economic activity centers and major transportation facilities (20/20 - 100%)
4. Focus on operational improvements, management systems, maintenance and technologies to relieve system congestion and to capitalize on available system capacity (20/20 - 100%)
5. Coordinate programs, plans, and investments with an between public and private partners (20/20 - 100%)
6. Identify and meet mobility needs of various populations during the transportation decision-making process while minimizing/mitigating the negative impacts of those transportation decisions (20/20 - 100%)
7. Promote livable communities through the design of a transportation system that is both sustainable and sensitive to community visions and values (20/20 - 100%)
8. Minimize and/or mitigate the impacts of the transportation system to preserve environmental resources (20/20 - 100%)
9. Encourage local governments to adopt urban design strategies and corresponding land development regulations that support the integration of land use and transportation (19/20 - 95%)
10. Enhance intermodal connections to improve the ability to get from one place to another on multiple modes seamlessly and efficiently (18/20 - 90%)
11. Improve designated evacuation and emergency vehicle routes to minimize emergency evacuation and response times (17/20 - 85%)
12. Consider the life cycle costs of transportation projects and make the most effective use of available traditional funds to meet those costs (17/20 - 85%)
13. Facilitate the regional movement of goods and people (15/20 - 75%)
14. Plan for and develop mechanisms to preserve future transportation rights-of-way (15/20 - 75%)

15. Preserve the character and aesthetic quality of transportation corridors and the surrounding area (14/20 - 70%)
16. Improve the connectivity of the transportation network through the provision of alternate routes (14/20 - 70%)
17. Identify and implement new local government funding sources and innovative funding mechanisms (14/20 - 70%)
18. Protect transportation system users from security threats (13/20 - 65%)
19. Implement public involvement and education activities that promote broad participation in and understanding of the transportation planning process (13/20 - 65%)
20. Change user behavior (12/20 - 60%)

Regional Transportation Products

An assessment of the status of regional transportation products was conducted and an inventory of both completed and planned regional transportation planning products was created. In general, regional goals and objectives developed around the state mirror those found at the metropolitan level.

Regional associations - 21 of 26 Florida MPOs have entered into formal arrangements to form seven regional associations of MPOs.

Transportation planning products - a wide variety of regional transportation planning products have been produced by one of more of the regional associations of MPOs, including long-range transportation plans, project priority lists, transportation models, public involvement programs and websites, and transportation studies in the areas of transit, economic impact, and land use vision.

Planned regional transportation planning products include: performance measures to assess the effectiveness of regional coordination activities, a regional transit action plan, and a regional transit economic impact study.

Regional transportation goals and objectives – three of the seven regional transportation planning efforts around the state have regional transportation goals and objectives: West Central Florida MPO Chairs Coordinating Committee, Central Florida MPO Alliance, and Southeast Florida Transportation Council.

Regional Groupings of MPOs

West Central Florida MPO Chairs Coordinating Committee (CCC), 1992 – 6 voting members

- Hillsborough County MPO
- Pinellas County MPO
- Pasco County MPO
- Hernando County MPO
- Polk County MPO
- Sarasota/Manatee MPO
- + 8 non-voting (non MPO) members

Central Florida MPO Alliance (CFMPOA), 1997 – 6 voting members

- Brevard MPO
- Lake-Sumter MPO
- METROPLAN ORLANDO
- Ocala/Marion TPO
- Polk County TPO
- Volusia County MPO
- +2 non-voting members (FDOT D1 & D5)

Southeast Florida Transportation Council (SEFTC), in process of formalizing

- Miami-Dade MPO
- Broward County MPO
- Palm Beach MPO

Northwest Florida Regional Transportation Planning Organization (NWFL RTPO)

- Okaloosa-Walton TPO
- Florida-Alabama TPO

Sarasota/Manatee MPO and Charlotte County-Punta Gorda MPO

- Sarasota/Manatee MPO
- Charlotte County-Punta Gorda MPO

Collier County MPO and Lee County MPO

- Collier County MPO
- Lee County MPO

Martin County MPO and St. Lucie County MPO

- Martin County MPO
- St. Lucie County MPO

20-year Transportation Financial Shortfall

Researchers concluded that developing a revised estimate of the 20-year statewide financial shortfall, based on an extrapolation of the 2002 shortfall estimate using sample financial data, was impractical and difficult to defend for the following reasons:

1. The eight MPOs for which sample financial data are available (those with recently completed and approved LRTPs) do not constitute a representative sample of Florida's MPOs as they are primarily from large urban areas
2. A shortfall estimate would have to be based on individual MPO average annual shortfall estimates (as was the case in 2002) as available completed MPO LRTPs have different horizon years and cover different time periods
3. The reporting of financial data varies significantly across the state
4. The definition of transportation "need" varies significantly across the state
5. All available financial data would need to be inflated or deflated as to be in a common year

A new statewide shortfall estimate should be calculated in 2006, at which time all 26 individual MPO long-range transportation plans would have been updated. MPOs across the state should cooperatively develop guidelines for determining "needed" projects and for reporting financial data to produce future 20-year financial shortfall estimates with more accuracy and confidence.

Table 5 illustrates designated Transportation Management Areas (TMA) in August 2005.

Table 5 MPOs and Designated Transportation Management Areas, August 2005

Metropolitan Planning Organizations and Designated Transportation Management Areas	
August 1997	***August 2005***
1 Charlotte County-Punta Gorda	1 Charlotte County-Punta Gorda MPO
2 Lee County	2 Lee County MPO
3 Naples (Collier County)	3 Collier County MPO
4 Polk County	4 Polk County TPO
5 Sarasota/Manatee County	5 Sarasota/Manatee MPO
6 Jacksonville Urban Area	6 First Coast MPO
7 Gainesville Urbanized Area	7 Gainesville MTPO
8 Fort Walton Beach Urbanized Area	8 Okaloosa-Walton TPO
9 Panama City Urbanized Area	9 Bay County TPO
10 Pensacola Urbanized Area	10 Florida-Alabama TPO
11 Tallahassee/Leon County	11 Capital Region MPO
12 Broward County	12 Broward County MPO
13 Palm Beach County	13 Palm Beach County MPO
14 Indian River County	14 Indian River County MPO
15 Martin County	15 Martin County MPO
16 St. Lucie County	16 St. Lucie MPO
17 Brevard Urban Area	17 Brevard MPO
18 Ocala/Marion County	18 Ocala-Marion County TPO
19 Orlando Urban Area	19 METROPLAN ORLANDO
20 Volusia County	20 Volusia County MPO
21 Miami Urbanized Area	21 Miami-Dade MPO
22 Hillsborough County	22 Hillsborough County MPO
23 Pasco County	23 Pasco County MPO
24 Pinellas County	24 Pinellas County MPO
25 Spring Hill/Hernando County	25 Herenando County MPO
	26 Lake-Sumter MPO

Source: Review of Florida MPO Long-range Transportation Plans, CUTR, August 2005

October 2008 Summary of Findings

In 2008, CUTR continued comparative reviews of MPO LRTPs undertaken in 1997 and 2002, in light of changes in federal and state legislation that modify LRTP priorities and requirements. Several systematic and voluntary changes altered the MPO planning environment, and each MPO has adopted a new LRTP since the last review.

Long-range Transportation Plans

The quality of the plans continued to improve. The new documents are easily understood by lay readers, despite increased rigor in the analysis. MPOs expanded focus on regional and statewide issues.

Specific Observations

- Plans were more user-friendly and better organized
- MPOs met or exceeded required level of public involvement and developed ne communication methods
- There was wide-spread reliance on the Efficient Transportation Decision Making (ETDM) screening process to identify cultural, environmental, or community impacts
- Lack of agreement across the state on LRTP horizon years and effective years continues
- While most MPOs discussed freight and economic competitiveness, few gave the issues detailed consideration
- Difficulty adjusting to the designation of the Strategic Intermodal System (SIS) and the associated investment policy was noted
- MPOs focused more on non-highway transportation modes
- Intelligent Transportation System (ITS) planning has become commonplace
- Financial data reporting varied widely across the state
- Interagency coordination has become institutionalized
- Little documentation of methodology is provided when projects are moved from the needs plan to the cost feasible plan and TIP
- Across the state, the definition of transportation need remains inconsistent
- Although MPOs aligned goals closely with SAFETEA-LU, they paid less attention to the goals and objectives of the FTP

20-year Transportation Financial Shortfall

The **statewide 20-year funding shortfall increased to $62.5 billion, an inflation-adjusted 46 percent**. This represents an annualized statewide shortfall of just over $3.1 billion per year. The shortfall has increased by 110 percent since 1997. Factors within and beyond the control of MPOs are driving the growth.

All MPOs with the exception of Indian River County projected a shortfall over the life of current LRTPs. Shortfalls by MPO are presented in Table 6 and ranged from a high of nearly $9 billion to a surplus of nearly $20 million. The dollar amount of the shortfall

does not appear to correlate with MPO population, and the percentage of the shortfall was not proportionately distributed across MPOs. Among MPOs with the largest shortfalls, only one has a population over one million, while two have less than 250,000. Furthermore, several of the state's largest and most established metropolitan areas have the smallest percentage shortfalls. Possible explanations include enactment of dedicated transportation sales taxes and impact fees by local governments, slower growth rates in those areas, and the presence of more SIS facilities, which receive the majority of state revenues.

Table 6 MPO LRTP Percent Shortfall, October 2008

MPO	*20-year Shortfall (millions)*	*Percent Shortfall*
Okaloosa-Walton	$6,399.2	85.3%
Gainesville	$359.1	84.4%
Martin & St. Lucie	$2,098.9	76.3%
Hillsborough	$6,917.6	73.0%
Bay	$4,230.3	72.3%
Florida-Alabama	$8,958.3	65.6%
Lee	$4,668.6	63.5%
Polk	$6,505.6	65.3%
Ocala-Marion	$781.8	59.2%
Brevard	$935.4	57.4%
Charlotte-Punta Gorda	$716.6	53.6%
Pasco	$1,644.4	51.4%
First Coast	$3,166.8	47.2%
Hernando	$498.9	47.1%
Collier	$2,103.2	41.4%
Lake-Sumter	$683.3	38.9%
Capital Region	$1,066.5	38.8%
Volusia	$717.7	35.6%
Sarasota/Manatee	$983.9	26.6%
Broward	$2,245.0	24.2%
Palm Beach	$1,565.0	22.2%
Miami-Dade	$3,260.6	14.3%
METROPLAN Orlando	$1,244.5	12.7%
Pinellas	$741.1	9.4%
Indian River	-$19.8	-2.3%
Total	**$62,472.5**	**42.9%**

Source: Review of Florida MPO Long-range Transportation Plans, CUTR, October 2008

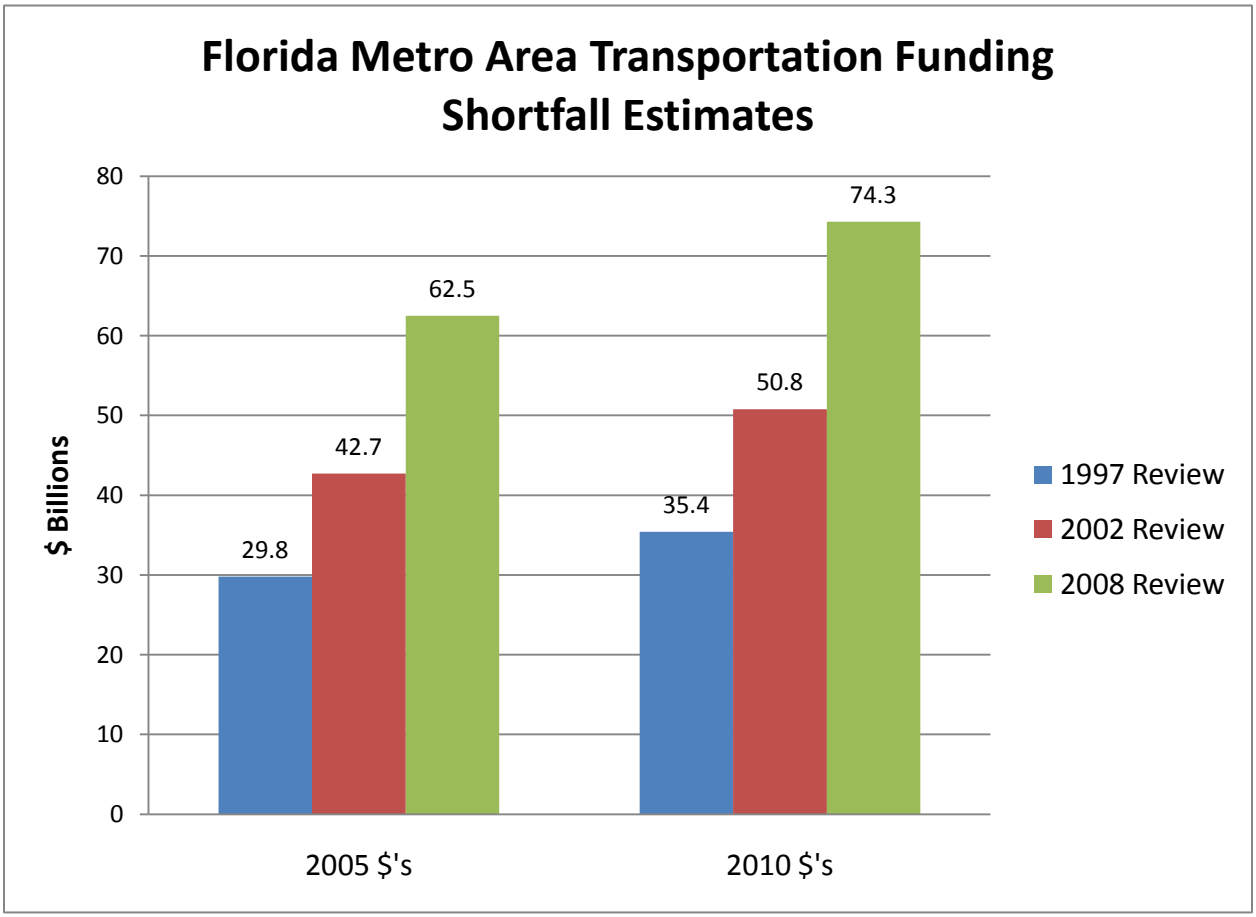
Table 7 Florida MPO 20-year Funding Shortfall

Review Year	Shortfall in 1995 Dollars	Shortfall in 2000 Dollars	Shortfall in 2005 Dollars	Shortfall in 2010 Dollars*
1997	$22.3 billion	$37.7 billion	$29.8 billion	$35.4 billion
2002			$42.7 billion	$50.8 billion
2008			$62.5 billion	$74.3 billion

** Adjustment is done using Bureau of Economic Analysis' Implicit Price Deflator for GDP, State and Local Government Consumption Expenditures and Gross Investment*

		2005	2010
Implicit Price Deflator for 2 quarters of 2010:	118.8765	29.8	35.4252
Base year: 2005 (i.e. 2005 index = 100)	100	42.7	50.7603
		62.5	74.2978

Source: Review of Florida MPO Long-range Transportation Plans, CUTR, October 2008



Source: CUTR, 2010

Figure 22 Florida Metropolitan Area Transportation Shortfall Estimates

2030 SIS Multi-Modal Unfunded Needs Plan, FDOT, May 2006

Unfunded multi-modal needs in 2030 as reported by FDOT in May 2006, presented in Table 12, total $53.2 billion. Unfunded transit needs in support of SIS during that same period are projected to be $4.5 billion, which increases SIS unfunded needs to $57.7 billion.

Table 8 Florida Strategic Intermodal System Unfunded Needs, May 2006

Mode	***Unfunded Needs (billions)***
Highways	$45.1
Aviation	$3.1
Seaports	$2.8
Rail	$1.9
Spaceport	$0.3
Subtotal	***$53.2***
Transit Needs in Support of SIS	$4.5
Total	**$57.7**

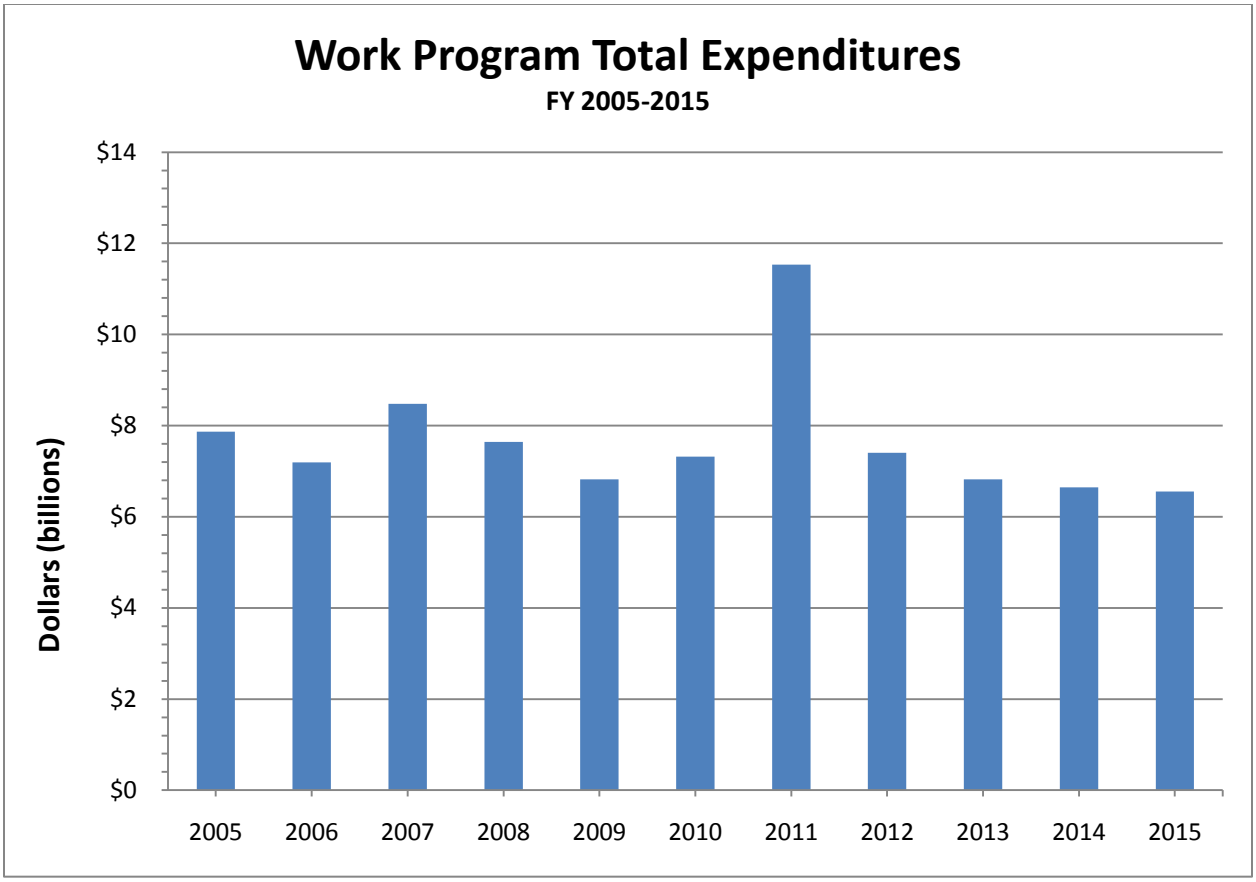
Source: SIS Multi-modal Unfunded Needs Plan, FDOT, May 2006

FDOT 5-Year Work Program (2009-2010)

The FDOT five-year Work Program is a listing of all transportation projects planned for each of the five fiscal years in accordance with section 339.135 Florida Statutes. The Work Program is developed by FDOT districts and Florida's Turnpike Enterprise in collaboration with Metropolitan Planning Organizations and local governments. The program is also developed with input from citizens, the Florida legislature, and the Governor's office.

The process of developing a Tentative Work Program starts in the summer of each year with the solicitation of input from the stakeholders mentioned above. By September 15, FDOT submits a Legislative Budget Request (LBR) for the upcoming fiscal year to the legislature and the Governor. During the months leading up to and through the legislative session, the Tentative Work Program is refined and finalized. The Tentative Work Program is submitted to the Florida Department of Community Affairs (DCA) and the Florida Transportation Commission and then to the Governor and the legislature in the March to April time period. The legislature approves the funding for year-one of the Tentative Work Program and, on July 1, the FDOT Secretary adopts it. The Tentative Work Program that was being developed and ultimately approved becomes the new Adopted Work Program for the new five-year planning period.

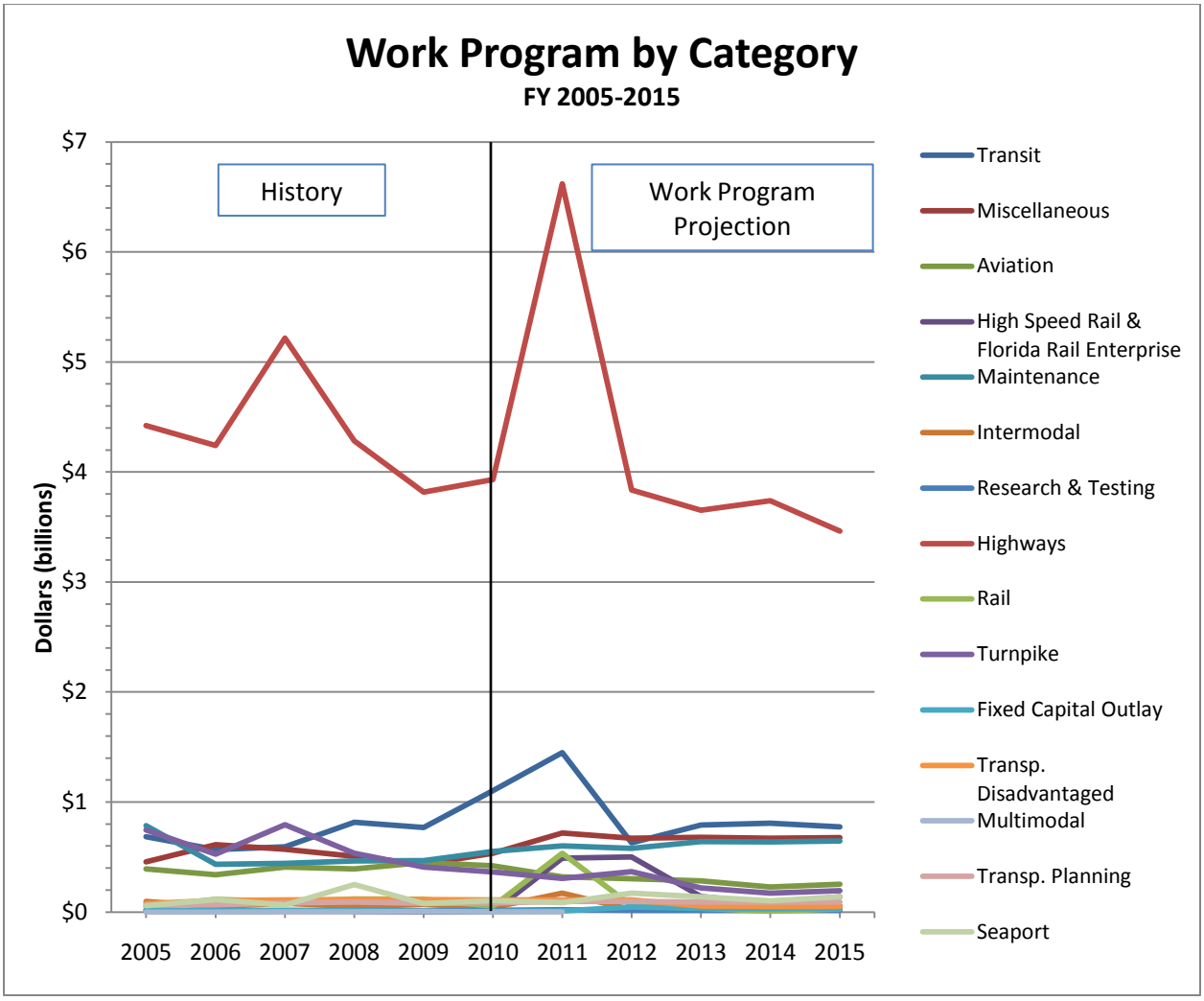
The historic and projected total funding levels of the Work Program are presented in Figure 23. Note, that the funding for the period of FY2005 through FY2010 is the actual spending, while the numbers for FY2011 through FY2015 is a projection of the current adopted Work Program.



Source: FDOT Office of Work Program

Figure 23 FDOT Work Program Total Expenditures, 2005-2015

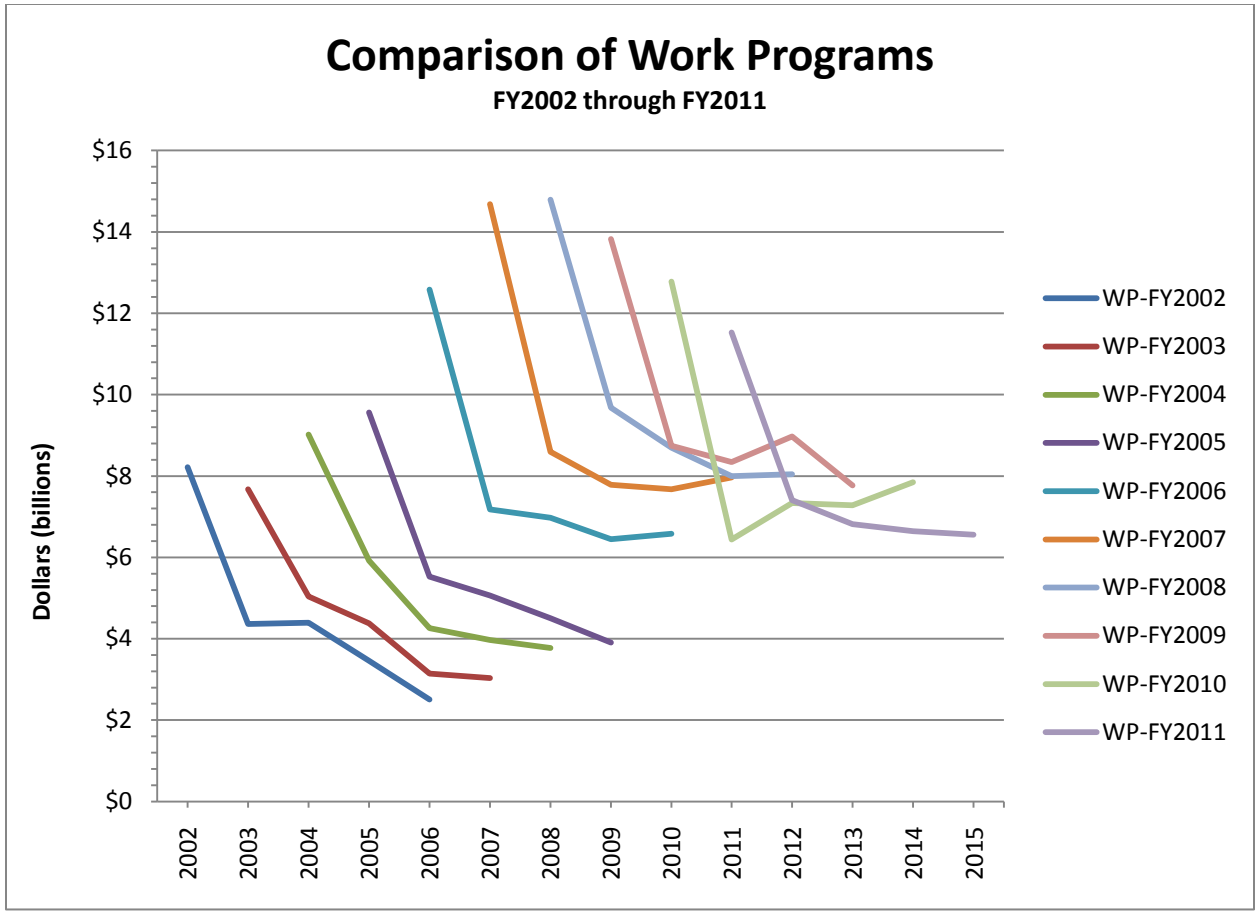
Figure 24 presents Work Program expenditures by funding category. Numbers through FY2010 are actual historic expenditures and numbers from FY2011 forward are projected Work Program expenditures.



Source: FDOT Office of Work Program

Figure 24 FDOT Work Program by Category, 2005-2015

A new five-year Work Program is being developed and adopted every year. Each year, the unused funding from the previous-year work plan is being rolled over into the current-year Work Program. Typically, the roll-over dollars from the previous program are added to the first years of the current Work Program. Therefore, the programmed five-year funding of the Work Program is very unevenly distributed with a large bias towards the earlier program years. This trend is demonstrated in Figure 25 that summarizes the level of funding programmed by the last 10 Work Programs, from FY2002 through FY2011.



Source: FDOT Office of Work Program

Figure 25 Comparison of Work Programs, 2002 through 2011

A look at the last four adopted work programs shows the impact of the reduction of actual and expected revenues. Since the work program adopted in fiscal year 2007 there has been a steady decline through and including the FY 2011 to 2015 adopted program. While not surprising given the economic conditions, it is critical when viewed in light of the growing backlog of needs that have been described in the earlier section of this paper.

While FDOT is not responsible for all of the unfunded metropolitan area needs identified at $74.3 billion, it is obviously losing ground in its ability to address the SIS unfunded needs identified in 2006 of $57.7 billion.

Short-Term and Long-Term Transportation and Infrastructure Issues

Short-Term Issues

Issue 1: Funding Transportation Needs - Most urban and interregional highway corridors are expected to be heavily congested during peak periods by 2025, even after planned improvements are made. Many of the state's airports are projected to be operating at more than 80 percent of capacity, the point at which expanded capacity should be under construction. Florida's seaports must improve waterside, terminal, and landside infrastructure to handle rapid growth in freight and cruise passenger activity. Significant additional capacity is needed in rail and urban transit systems to provide viable options for moving people and freight within and between urban areas.

In recent years, the economic recession has taken a toll on revenues accruing to the State Transportation Trust Fund. These revenue reductions coupled with legislative actions to divert transportation revenues to non-transportation purposes has resulted in significant reductions to project commitments in the FDOT 5-year work program (approximately $10 billion since 2006). Additionally, a significant share (approximately 33%) of Florida's transportation revenues is automatically adjusted for inflation. However most transportation revenue sources (such as federal fuel taxes, local option fuel taxes, motor vehicle license taxes/fees, and the documentary tax) are set at rates established in law and therefore lose buying power annually. While inflation results in increases in certain FDOT revenues, it also causes costs to rise. If the costs of FDOT's programs rise proportionately to the rate of inflation, then FDOT will be losing ground, since not all revenues are responsive to inflation. The combination of these issues disrupts the stability of the 5-year work program and hinders the ability to address significant transportation backlog and meet future transportation needs.

Issue 2: Reauthorization of Federal Surface Transportation Programs - The current authorization of federal surface transportation programs (SAFETEA-LU) has been extended to December 31, 2010. In recent years there has been considerable national debate about such issues as federal funding levels, the nature and extent of the future federal role in national transportation infrastructure investments, the equitable allocation of funds to the states and Metropolitan Planning Organizations, federal program structure/program flexibility, and public private partnerships.

Although SAFETEA-LU promised a rate of return of 92% to the states, Florida's rate of return has actually been closer to 87% for highway programs and 73% for transit programs. There are currently more than 100 federal programs and sub-allocations, which come with requirements that are inflexible.

Also, the earmarking of projects Congress circumvents the planning process and reduces states' flexibility to meet their needs.

Issue 3: Production Readiness - Producing a project from concept-to-concrete is a multi-year process and it will be important to make sure the project pipeline in the 5-year work program and beyond consists of projects that can be brought to production in a timely manner. Therefore, it is important that the department look beyond current production pressures allow for adequate funding and programming of project development phases and right-of-way acquisition to ensure the department is prepared to respond to unexpected revenue increases in the future.

Issue 4: Regional Issues - Our urbanized areas are growing and we are becoming more regional in our growth patterns. Our urbanized areas are also growing toward each other and, in some cases; they have merged into a single urbanized area (Miami-Dade, Broward and Palm Beach Counties for example). In even more cases, Florida's urbanized areas grown so much that their urbanized area boundaries have crossed county lines raising a host of jurisdictional, planning and funding issues when it comes to transportation. The current project selection process in federal and state law relies heavily on MPOs and counties. Today there are 26 MPOs in the state and only a few cover multi-county areas. The Transportation Regional Incentive Program (TRIP) is designed to encourage regional partnerships and provide an incentive for investment in our regional transportation systems by providing a 50 percent state match to local, regional, and private investment in facilities that regional entities have determined to be a priority.

Issue 5: Rail Issues (Passenger and Freight) - Passenger rail will steadily become more important as an alternative to the congestion on Florida's highways and increase the mobility of tourists, business travelers, and citizens, especially older Floridians. Furthermore, the concerns over dependence on foreign oil, fluctuating gas prices, and fuel supply disruptions as a result of natural disasters is likely to increase the reliance on transit (commuter rail, heavy rail, light rail, and bus) as an alternative to the automobile for commuting. There are a number of initiatives underway in Florida to create or expand intercity passenger rail and commuter rail services in Florida. Including but not limited to; expansion plans for Tri-Rail by the South Florida Regional

Transportation Authority, the South Florida East Coast Corridor Study, the recently approved Sun Rail service in central Florida, Metrorail expansion projects under consideration in Miami-Dade County, a proposed commuter rail system in the Tampa Bay area, the Jacksonville Transportation Authority feasibility study for commuter rail in northeast Florida, and the initiation of work on Phase I of the high speed rail system in the state.

Freight rail will also continue to play a key role in support of Florida's economy. Given the fact that Florida's rail network is almost entirely owned and maintained by private interests, the state's investment in the system must clearly demonstrate a public interest.

Long-Term Issues

Issue 1: Long-Term Revenue Uncertainties - Current revenue sources are not sufficient to fund long-term transportation needs. Potential uncertainties in the long-term could dramatically alter FDOT revenues and thus require structural changes in FDOT's overall revenue approach. These uncertainties include the impact of:

- A growing market for more fuel efficient cars (hybrids, compressed natural gas, electric, gasohol, etc.)
- Significant price increases for fuel
- National emphasis on alternative fuels and technologies
- Telecommuting
- An aging population and the reality that the elderly drive less than younger drivers so they consume less fuel

The policy issue that needs to be addressed in the long-term is the need to evaluate Florida's future transportation revenue collection system and whether such system should be based totally, or partially, on vehicle miles traveled or some other methodology. Given that such changes require legislation and the advancement of technology, this process could take decades.

Issue 2: Environmental/Community Livability/Growth Management Issues - The delicate balance between transportation and community livability is becoming more challenging as demand for people and freight mobility continues to rise and choices for locating new development and infrastructure become more constrained. In the past, transportation investments often have focused on the fast movement of vehicles without adequate consideration of community livability. At the same time, rising housing and land costs in urban areas encourage sprawling development and longer

commuting patterns, further adding to the strain on the transportation system and deteriorating the quality of life for residents and visitors. Key issues to monitor include:

- Air Quality Non-Attainment Area Designations
- Revisions to Florida's Growth Management Process
- Federal Climate Change Legislation
- FHWA Livability Initiative

Issue 3: Transportation, International Trade, and Florida's Economy - Investments in Florida's transportation system are clearly linked to job creation and retention efforts and the overall health of Florida's economy. A study of the macroeconomic impact of investments in the FDOT 5-year work program indicated that investments returned nearly $5.00 in travel and other economic benefits to Florida's residents.

Issue 4: Security, Emergencies, and Safety of the Transportation System - Attention to improving the security of transportation facilities has increased since September 11, 2001. Recent federal and state legislation imposing significant security measures at airports, seaports, and other passenger and freight facilities nationwide have impacted the efficient movement of passengers and freight throughout the state and created additional financial pressures for transportation agencies. Hurricanes and other natural disasters have also highlighted the importance of effective emergency response and the vulnerability of the transportation system to major disruptions.

Issue 5: New Capacity - Throughout the 21st century, Florida's ability to provide for the mobility of people and freight will be increasingly at risk. This is due to a projected strong growth in population, visitors, and economic activity all of which will increase the demand for moving people and freight. Investment in the state's transportation system has not kept pace with growth due to limited resources, increasing construction and right-of-way costs, and constraints (physical and policy) on adding capacity to many transportation facilities.

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