# Chapter 5: Minnesota Transportation Funding

*Public transportation funding is appropriated to specific modes and is generally not transferable between the modes.*

Transportation investments have been one of the top issues for the State of Minnesota and the nation for many years. Despite the increases in transportation funding over the last 20 years, the challenge of meeting the growing needs for transportation investments continues to be an issue. This chapter will describe the sources of public revenues for transportation in Minnesota, historical trends in revenues and costs and their projections, and the innovative funding tools available.

Public transportation funding is appropriated to specific modes and is generally not transferable between the modes. The following discussion is organized by mode. The main focus of this chapter is the funding for the statewide highways and the transit systems, with a brief overview of public funding for aeronautics, railroads, and waterways.

## Transportation Expenditures in Minnesota

In 2005, $3.37 billion was spent on highway and transit capital and maintenance improvements in Minnesota by all public agencies[1]. This was about 1.52 percent of the Minnesota State Gross Product — a measure of the total income for the state. Although total transportation expenditures have increased over time, as a share of the gross state product they have declined since 1990, suggesting that transportation investments have not kept pace with growth of the economy.

At the end of the 2007 Legislative session, the Minnesota state operating budget was expected to be $55.93 billion for the 2008-2009 biennium (July 1, 2007 to June 30, 2009). This was based on the projected tax and user fee revenue collections. The level of funding appropriated may change during the biennium to reflect current circumstances.

Transportation accounted for 8.7 percent or nearly $4.8 billion of the state biennium operating budget. Typically, transportation expenditures range from seven to nine percent of the state budget. Figure 5.1 shows the share of the state transportation expenditures in relation to all the other state programs for the 2008-2009 biennium. Transportation is the third largest state program in Minnesota after health and human services and education.

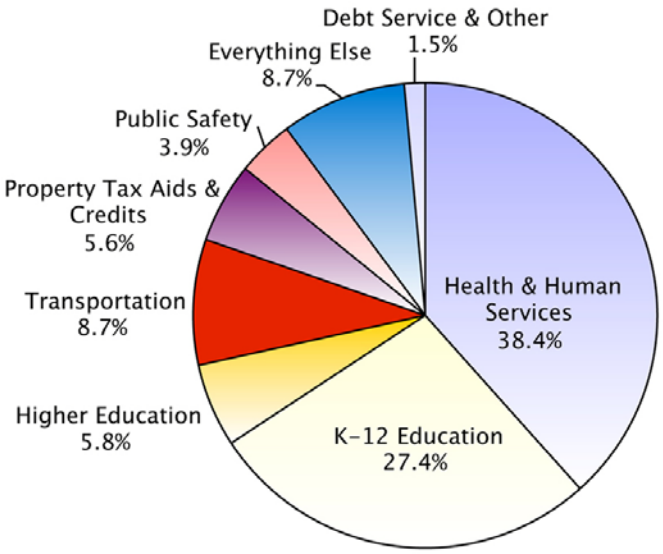


**Figure 5.1 Minnesota Total Appropriated State Expenditures, All Funds 2008 to 2009 Biennium ($55.39 billion)**

*Source: Minnesota Management and Budget*

The largest share of the state transportation expenditures are for roads and bridges. For example, in SFY 2007 road and bridge expenditures accounted for 86.6 percent of the total state transportation expenditure, as shown in Figure 5.2.

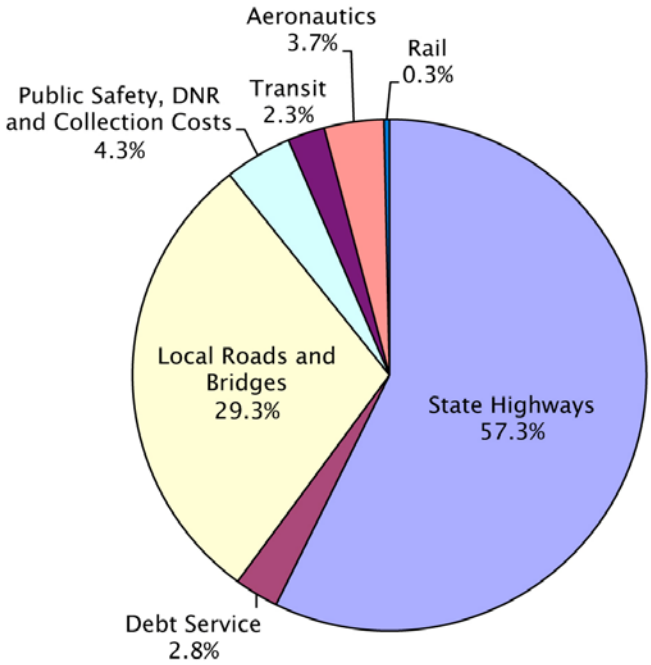


**Figure 5.2 Minnesota State Transportation Expenditures by Type for SFY 2007 ($2.4 billion)**

*Source: Mn/DOT Office of Finance*

The state budget does not include expenditures by local agencies from local revenue sources. In 2004, an estimated $1 billion were spent by local governments on roads and streets from local sources[2]. Transportation expenditures of the Twin Cities Metropolitan Council are also excluded from the state expenditures.

## Minnesota Highway Revenue Sources

Highways are funded by state and federal revenues that are raised through taxes and user fees. Figure 5.3 illustrates the flow of revenue for state transportation investments.

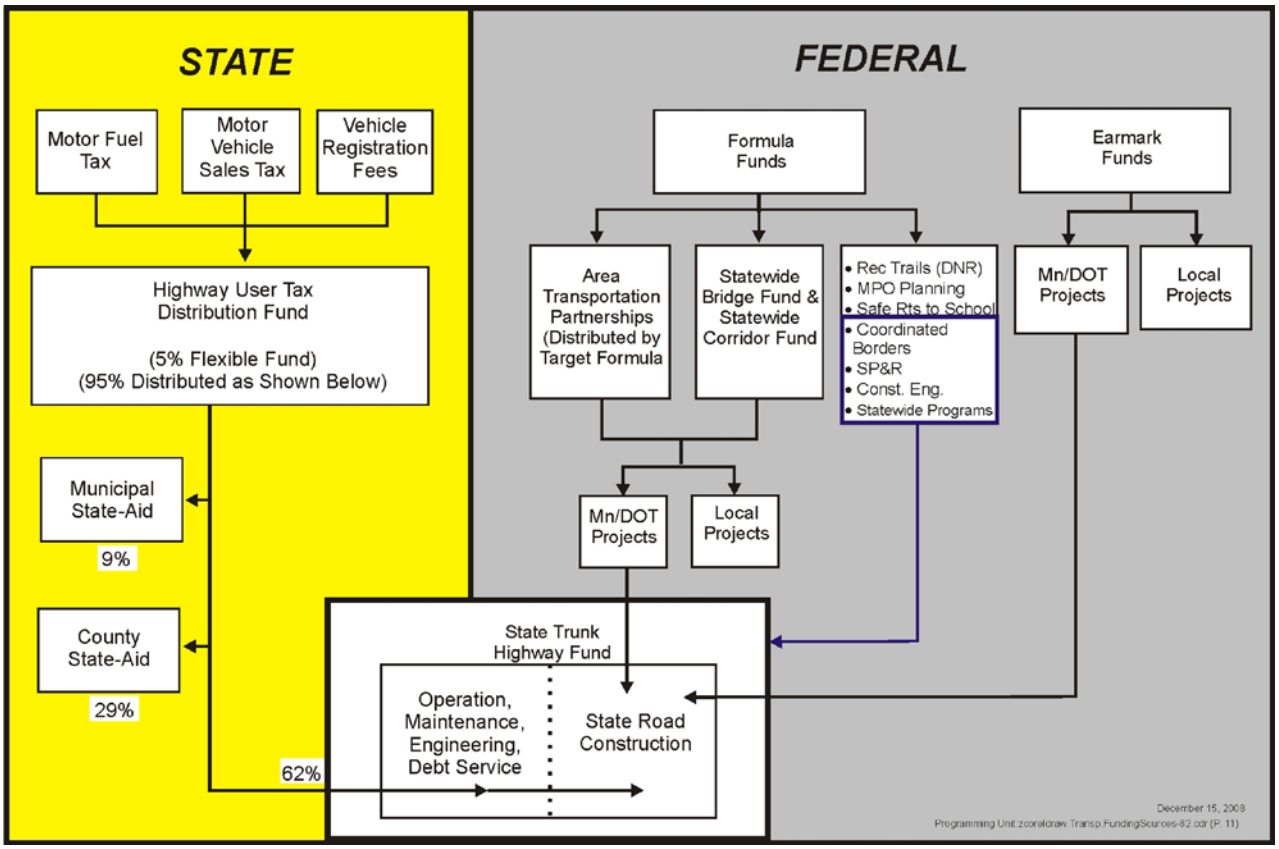


**Figure 5.3 Minnesota's Primary Transportation Funding Sources for State Highways**

*Source: Mn/DOT Office of Investment Management*

### State Revenue Sources

As depicted in Figure 5.3, the regular state revenue sources for transportation are the Motor Vehicle Fuel Tax (MVFT), Motor Vehicle Registration Tax and Fees (tab fee), and the Motor Vehicle Sales Tax (MVST). In SFY 2007, these three sources raised approximately $1.29 billion in revenues. The MVFT raised 50 percent of the total revenues, the tab fee raised 38 percent, and the MVST raised 12 percent.

Highway improvements may also be funded by bonding. Bonding, which must be authorized by the State Legislature, is actually a financing approach, not a primary source of revenues. Bond financing can be used to advance construction of projects to

an earlier time period than would be feasible under the pay-as-you-go approach. The bonds are then paid through future revenues, typically over a 20-year period. This type of financing helps to avoid inflationary construction cost increases and generates road user benefits earlier.

The state transportation revenues are deposited in the Highway User Tax Distribution (HUTD) Fund. After withholdings for administrative costs, the Department of Natural Resources (DNR), and five percent for the Flexible Fund, the remaining revenues are constitutionally distributed among the State Trunk Highway Fund (62 percent), the County State Aid Fund (29 percent), and the Municipal State Aid Fund for cities with populations greater than 5,000 (nine percent).

The State Trunk Highway Fund is managed by Mn/DOT for investments on the state highway system and supports four general types of expenditures:

- Highway Operations and Maintenance including traffic management, snow removal, pavement patching, etc.
- Engineering Services including planning, design, and project delivery for state highway improvements
- Debt Service on bonds
- State Road Construction, including the state highway capital program for new construction and reconstruction of highways and bridges

## Federal Revenue Sources

The revenue raised by the federal Motor Vehicle Fuel Tax and other fees is collected in the Federal Highway Trust Fund. It is then distributed to the Federal Highway Account, the Federal Transit Account, and other federal transportation accounts. Funds from the Federal Highway Account are distributed to the states for use on both eligible state and local highways. Minnesota receives federal funds in three ways: formula funds (apportioned), discretionary programs (allocated), and earmark funds.

### Federal Formula Funds

The federal formula funds are apportioned to states based on factors such as the size and usage of the system and the state contribution to the Federal Highway Account. Federal formula funds are further distributed as follows.

*The largest proportion of the federal formula funds is distributed among the eight ATPs.*

First, a portion of the federal formula funds is assigned to specially designated federal programs administered by Mn/DOT or other agencies such as the Safe Routes to School Program, the DNR Recreational Trails program, and the Metropolitan Planning Program.

Next, formula funds are allocated to the Statewide Bridge and Corridor Program. This program was created to assist in funding larger bridge and corridor improvement projects that a single Mn/DOT District or Area Transportation Partnership (ATPs) would otherwise have difficulty funding with its regular targeted share of federal funds.

The remainder, and largest proportion of the federal formula funds, is distributed among the eight ATPs based on a target formula. The target formula is based on the ATP's share of statewide infrastructure preservation needs (60 percent), safety needs (10 percent) and mobility needs (30 percent). Each ATP includes a Mn/DOT District and various local transportation partners, such as Metropolitan Planning Organizations (MPOs) and Regional Development Commissions (RDCs) as well as transit/modal, county, city, and tribal government representatives. The ATPs integrate the state and local priorities for federal funding within their regions and determine the division of federal funding between Mn/DOT and local governments. On average, about two thirds of the federal funding is programmed for state highways, but this can vary between ATPs and over time.

### Federal Discretionary and Earmark Funds

Discretionary funds and earmarks are distributed by congressional designation or through a competitive process. For example, in 2008, Mn/DOT was awarded $133.3 million through the U.S. Department of Transportation's Urban Partnership Agreement program to implement innovative strategies to improve mobility on the I-35W corridor in the Twin Cities.

# Trends in Minnesota Highway Revenues and Costs from 1990 to 2007

## State Revenue Trends

*The growth in transportation revenues slowed significantly from 2000 to 2007.*

The state highway revenue collections increased at an average annual rate of 2.7 percent between the years 1990 to 2007. The 1990 to 2000 decade was a period of high growth for all revenue sources. However, this growth slowed significantly from 2000 onward as illustrated in Figure 5.4, which shows the HUTD fund revenue collection for the period 1990 to 2007.

From 1990 to 2000, the increase in revenue collections coincided with a period of high economic growth. The expanding global economy kept inflation low and employment high, with Minnesota performing better than the U.S. economy. The increase in incomes and population resulted in an increase in the purchase of new vehicles and travel. Stable and low world oil prices encouraged the purchase of large, less fuel efficient vehicles, further increasing the motor fuel and registration tax revenues.

Between 2000 and 2007, however, state transportation revenues grew by less than 1 percent per year. For the first five years HUTD fund revenues increased by 1.8 percent. During the last two years, 2006 and 2007, each of the HUTD fund revenues experienced declines in collections.

The U.S. economy experienced a short recession in 2001. Minnesota's economy did not rebound to the growth rates previously experienced.

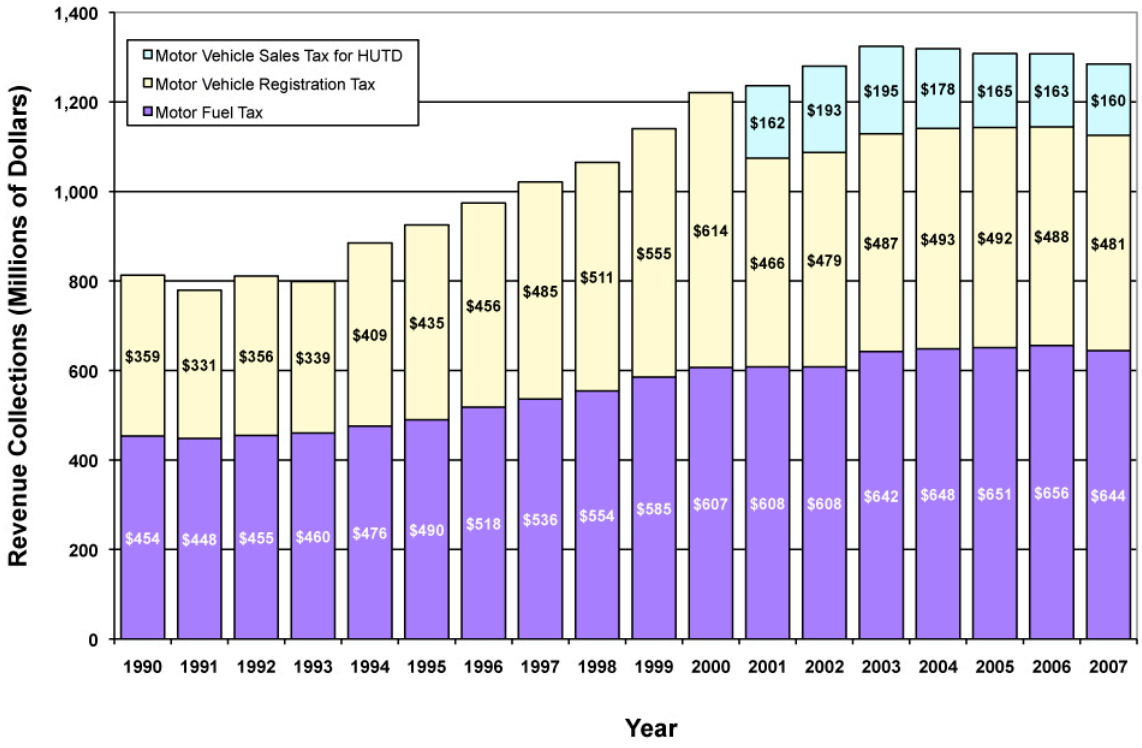


**Figure 5.4 Trends in Minnesota's Primary Transportation Revenue Sources**

*Source: Minnesota Management and Budget*

## State Motor Vehicle Fuel Tax

*High fuel prices have reduced travel and caused a shift toward more fuel efficient vehicles, resulting in a reduction in fuel tax revenues.*

Revenues from the state's Motor Vehicle Fuel Tax increased at an annual average rate of three percent from 1990 to 2000. Beginning in 2001, the growth in world economies, particularly China and India, increased the demand for oil, causing world oil prices to increase. The initial increases in oil price did not significantly impact demand for travel. However, the continued increase in world demand for oil, without a significant increase in supply, caused world oil demand to approach the world oil supply. Since 2005, any risk of shocks to the supply of oil has caused oil prices to increase rapidly. The increasing oil prices from 2005 onward reduced the demand for travel and caused a shift toward the purchase of more fuel efficient vehicles, reducing fuel consumption and hence motor fuel tax revenues.

## Motor Vehicle Registration Tax

The Motor Vehicle Registration Tax (tab fee) grew at annual average rate of more than five percent from 1990 to 2000. The growth in revenues was particularly strong in the latter half of the period as is evident in Figure 5.4.

Revenue from the tab fee was effectively reduced in 2000 when the depreciation schedule was changed so that the tax was only based on the value of the vehicle in the first year. In subsequent years, the amount of tax paid was capped.

### Motor Vehicle Sales Tax

Prior to the year 2000, the MVST was all deposited in the State General Fund. In 2000, to compensate for the loss of revenue from the cap on tab fees, the Legislature statutorily directed that 30 percent of the MVST revenue be deposited in the HUTD fund. This shift from tab fees to MVST resulted in revenue being more dependent on the purchase of new vehicles.

*Revenues from the MVST peaked in 2003 at $195 million and have decreased every year since at an average annual rate of 5 percent.*

Just as a portion of the MVST was directed to fund highways, its value as a revenue source began to diminish. The MVST had experienced an annual average growth rate of 6.8 percent from 1990 to 2000, a period of strong economic growth. However, the demand for new vehicles has never fully recovered following the recession of 2001. Revenues from the MVST peaked in 2003 at $195 million and have decreased every year since at an average annual rate of 5 percent.

In November 2006, Minnesota voters passed a constitutional amendment that dedicated 100 percent of the MVST to transportation, phased in over a five-year period. The amendment specified that up to 60 percent of the MVST would be dedicated to highways (the HUTD fund) and at least 40 percent to transit.

### The Bond Accelerated Program

In June 2003, the Minnesota State Legislature adopted legislation authorizing millions of dollars in bonding to accelerate the delivery of transportation projects. The Bond Accelerated Program (BAP) provided innovative financing of over $900 million for highway and transit projects. The BAP consisted of $400 million in state bonds, $425 million in federal advanced construction[3] funds, and $100 million in state highway funds. The $400 million in bonds allowed Mn/DOT to leverage approximately $425 million of federal advance construction funds. The 20-year bonds were repaid with $36 million each year from internal Mn/DOT budget savings. The $100 million state funds came from spending down the State Trunk Highway Fund balance over 2004 to 2007.

## Federal Revenue Trends

From 1990 to 2007, federal revenues for highways generally increased. This can be attributed to increased funding levels in the federal funding bills. Figure 5.5 shows the federal formula funds received by Minnesota for highway investments since 2000. This is the period for which a consistent series of data is available.

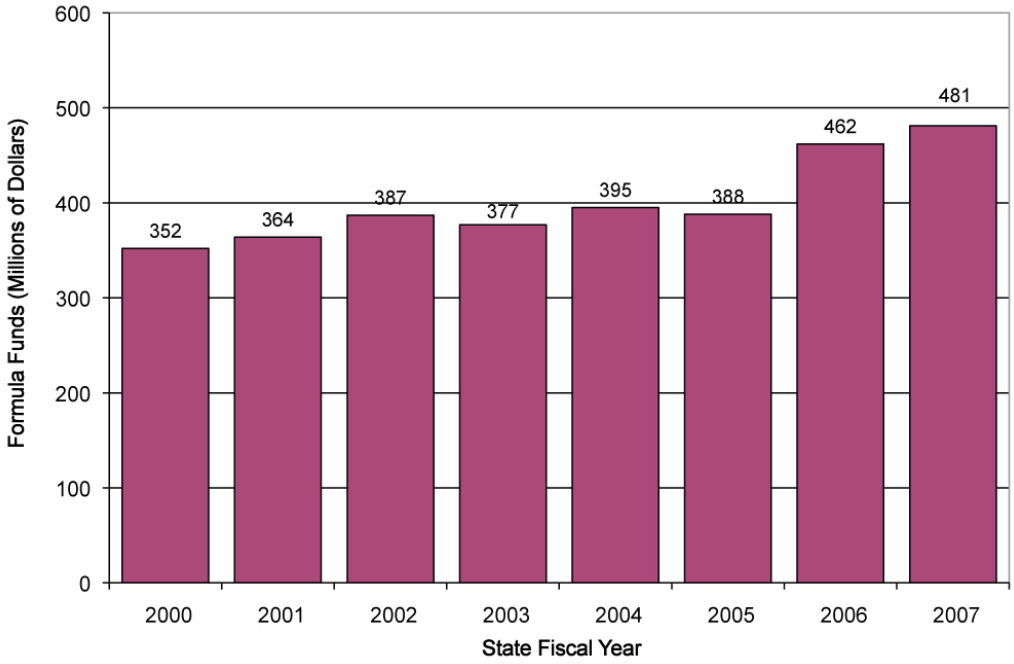


**Figure 5.5 Federal Formula Funds for Highway Investments**

*Source: Mn/DOT Office of Investment Management*

*The allocation of gasohol tax revenues changed Minnesota's federal revenue allocation beginning in 2006.*

The Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) federal funding bill passed in 2005 significantly increased funding for highways. This was done in two ways. First, there was a change in the way taxes from gasohol (a blend of gasoline and ethanol) are distributed between the Highway Account and the Transit Account. The allocation of gasohol tax revenues was changed under SAFETEA-LU such that the Highway Account received more money from taxes on gasohol than it did under the previous funding bills. This particularly benefited Minnesota as gasohol is mandated to be used in the state. The new distribution increased Minnesota's contribution to the Highway Account, resulting in increased federal formula funds for Minnesota. Second, Congress authorized increased federal funding to be supported by spending down accumulated balances in the Federal Highway Trust Fund.

*The Federal Highway Trust Fund balance is declining and likely to be in deficit before 2011.*

While SAFETEA-LU authorized more funding for transportation, federal motor fuel tax growth has been limited. Federal motor fuel tax is the main source of revenue for the Highway Trust Fund and hence the Highway Account. A decline in the growth rate of vehicle miles traveled has reduced the rate of increase in revenues deposited in the Highway Account. To continue meeting the funding levels authorized under SAFETEA-LU, the Highway Account fund balance is projected to become negative in federal fiscal year 2009 (October 2008 to September 2009) and into the future, as shown in Figure 5.6. In the fall of 2008, Congress added $8 billion to the Highway Account to support funding levels of the SAFETEA-LU bill. This is a short-term fix, as the Highway Account is expected to be negative again before 2011. Additional congressional action will be required to maintain the current level of funding.

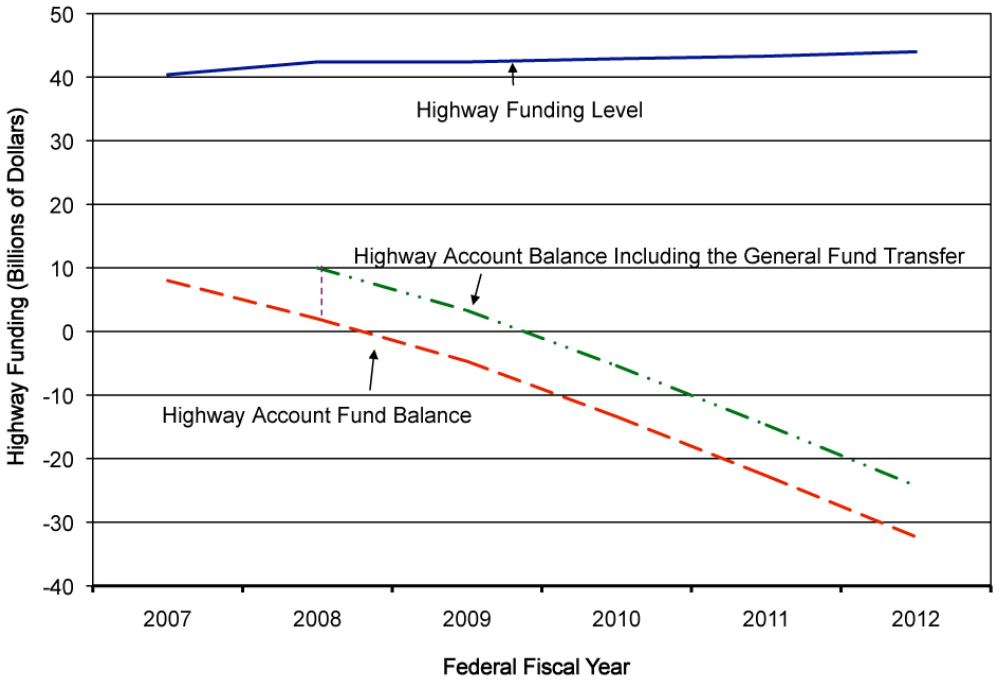


**Figure 5.6 Federal Highway Trust Fund Highway Account**

*Source: Office of U.S. Management and Budget (OMB), Winter FY 2009 Projection*

## Highway Construction Cost Trends

Over the period from 1990 to 2007, highway construction costs have increased at an average annual rate of 4.6 percent with record level increases since 2004. The recent spike in construction costs is largely attributable to an increase in prices of construction materials such as bituminous, steel, and cement, which are affected by a growing demand worldwide. The sharp cost increases since 2004, averaging at 12 percent per year, have been driven by high oil prices. Figure 5.7 compares increases in the highway construction cost index and the consumer prices index, illustrating the divergence between the increases in general inflation and highway construction costs.

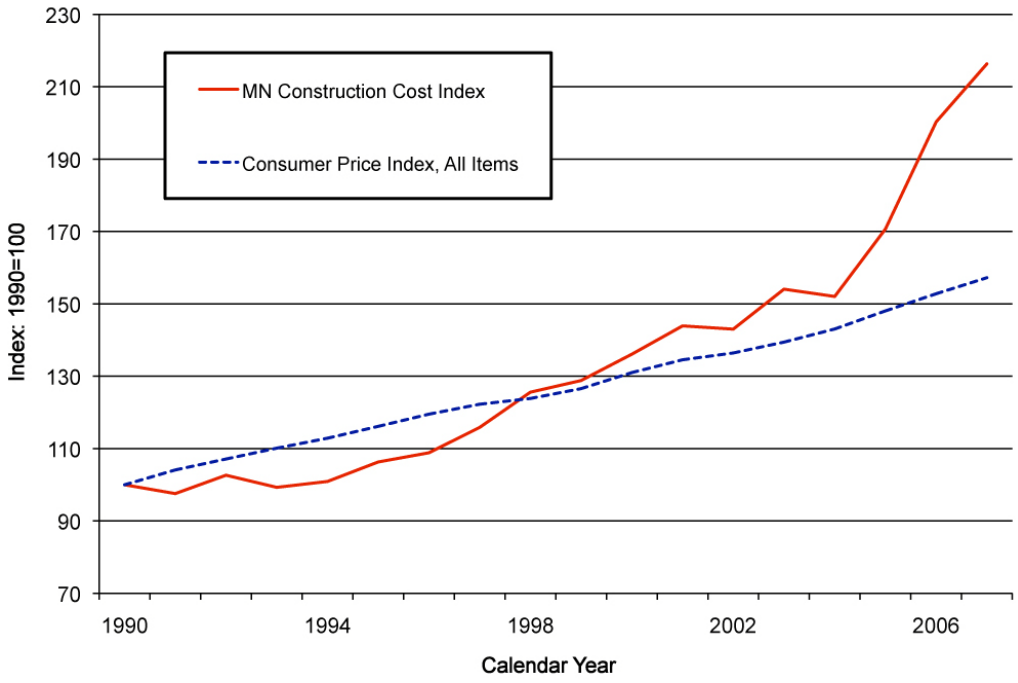


**Figure 5.7 Highway Construction Cost and Consumer Price Indices**

*Source: Mn/DOT Office of Technical Support; Bureau of Labor Economics*

*The high inflation rate in highway construction costs has reduced the buying power of transportation funds.*

The high inflation rate in highway construction costs has reduced the buying power of transportation funds, particularly since 2004. Figure 5.8 shows highway expenditures with and without inflation adjustment. Inflation adjusted expenditures show how much buying power has been reduced because of highway construction cost increases. Despite the increased level of revenues for transportation funding and increased use of bond funding, the increase in state road expenditures after adjusting for inflation has not increased as significantly.

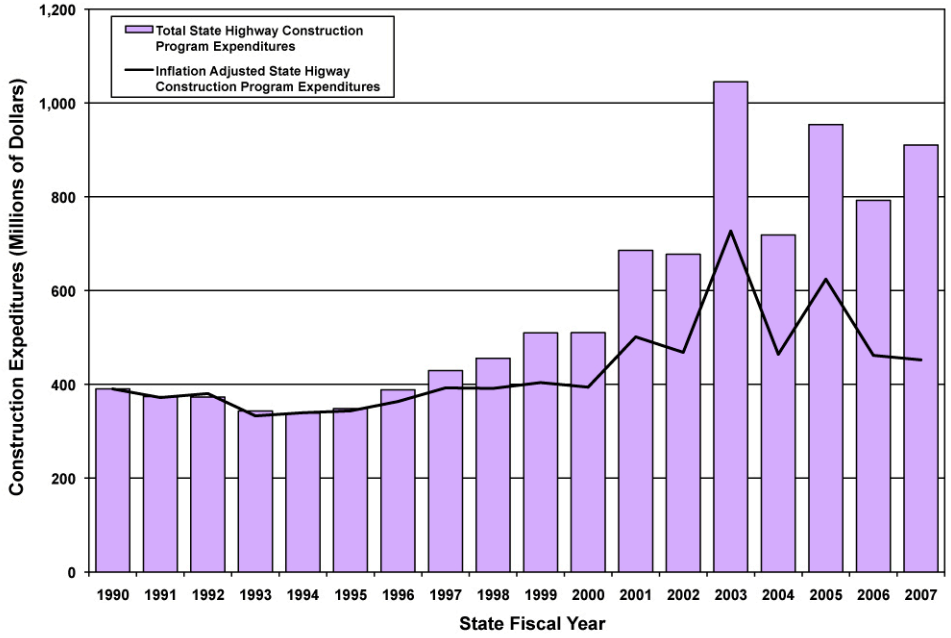


**Figure 5.8 Minnesota State Highway Construction Expenditures**

*Source: Mn/DOT Office of Investment Management*

# 2008 Transportation Funding – Chapter 152

In February 2008, the Minnesota Legislature enacted major legislation affecting transportation funding for highways and transit as well as investment priorities. The Legislature increased the state's Motor Vehicle Fuel Tax for the first time since 1988, increased the Motor Vehicle Registration Tax, and authorized an option of $.025 county sales taxes to develop and operate transitways in the Twin Cities Metropolitan Area and Greater Minnesota. The Legislature also authorized $1.83 billion in bonding over the 2009 to 2018 period to finance state highway related needs.

## Impact on Revenues

Minnesota Laws 2008, Chapter 152 increased the state motor fuel tax rate by five cents, from 20 cents to 22 cents per gallon in April 2008, followed by another increase of three cents per gallon in October 2008. In addition, Chapter 152 authorized a special fuel tax surcharge starting at 0.5 cents per gallon in August 2008 increasing to 3.5 cents per gallon. The surcharge will be imposed as long as there is debt service required on the bonds.

Chapter 152 also changed the depreciation schedule for the Motor Vehicle Registration Fee and removed the cap on the fee paid each year following the first year of registration, beginning with vehicles first registered in August 2008. The fee will be based on a 10 percent annual depreciation in the value of the vehicle until year 11 when a fixed surcharge of $25 will be paid.

### Impact on Expenditures

Of the $1.83 billion in bonds, Chapter 152 directed that $1.7 billion be used for the following highway related improvements:

- Tier 1 and 2 Bridge Program — repair or replacement of all fracture critical or structurally deficient bridges by 2018 ($1.2 billion). Of the 161 bridges that met these criteria, Mn/DOT has determined that 120 will need to be replaced or repaired by 2018. The total program cost is currently estimated at $2.5 billion over 10 years and will be funded through $1.2 billion of the $1.7 billion available through bonds with the remaining $1.3 billion from the state and federal tax revenues that make up the Mn/DOT State Road Construction Budget.
- Interchange projects ($40 million) split 50/50 between the Twin Cities Metropolitan Area and Greater Minnesota.
- Statewide Transit Facility Improvements ($50 million).
- Mn/DOT District 7 Legislative Priority ($100 million for Trunk Highway 60 from Bigelow to Worthington).

Of the remaining bonds, Mn/DOT plans to spend $275 million for accelerated pavement and safety projects in 2008 to 2010.

## State Road Construction Outlook from 2009 to 2028

*Projecting highway revenues and costs 20 years into the future does not lend itself to a high degree of certainty.*

For long-term planning purposes, an estimate of future revenues and cost increases has been developed. Projecting highway revenues and costs 20 years into the future does not lend itself to a high degree of certainty. This is especially true at this time, given the current turmoil in the national and state economy, the volatility in the price of gas over 2008, the extreme downturn in automobile sales, and the discussions surrounding a potential national Economic Recovery and Reconstruction Program emphasizing increased funding for infrastructure.

This long-term forecast, developed in early 2008, therefore, represents a snapshot in time. It is useful in developing a general sense of the revenues and costs and allows Mn/DOT to develop investment scenarios given a set of assumptions. For purposes of the four-year State Transportation Improvement Program that is updated annually, the forecast will be revisited to reflect current trends and any major changes in available funding due to new federal or state programs.

### Revenue Forecast

The revenue forecast has been based on assumptions derived from various national and state sources for outlook on future oil prices, growth in the economy, consumer behavior, and demographic changes. The following assumptions drive the forecast:

- The 2007 tax sources and tax rates will remain constant.
- The 2007 distribution of the State Trunk Highway Fund between the State Road Construction Program and other programs will remain constant.

- World oil prices will be at the 2007 fall price levels, in the range of $70 to $80 per barrel and increase at least in line with inflation.
- Economic growth will be slower than the boom of the 1990s. The growth rates in the late 1990s were historically high, fueled by the emergence of the Internet and globalization.
- The housing market slump and tighter credit will reduce the ability or willingness to borrow for car purchases in the first few years of the forecast period.
- The aging of the population (particularly in the latter half of the forecasting period) and the anticipated slower growth in population in Minnesota will reduce vehicle purchases and demand for travel.
- Federal funds will not increase until after 2016 because of the anticipated shortfall in the Federal Highway Account. It was assumed that Congress would honor the funding levels of SAFETEA-LU.
- No federal earmarks revenues are included.

*On average, revenues for the State Road Construction Program from the state sources have been projected to increase by 1.6 percent per year over the 20-year period.*

The revenues are forecast to decline in the initial few years followed by subsequent increases. On average, revenues for the State Road Construction Program from the state sources have been projected to increase by 1.6 percent per year over the 20-year period (the growth rates can vary from year to year). Tab fee and MVST contributions are more volatile than the fuel tax, so the economic uncertainty makes it a challenge to accurately project future revenues; modest rates of growth are assumed for these revenue sources. Figure 5.9 shows the future revenue levels forecast for the State Road Construction Program.

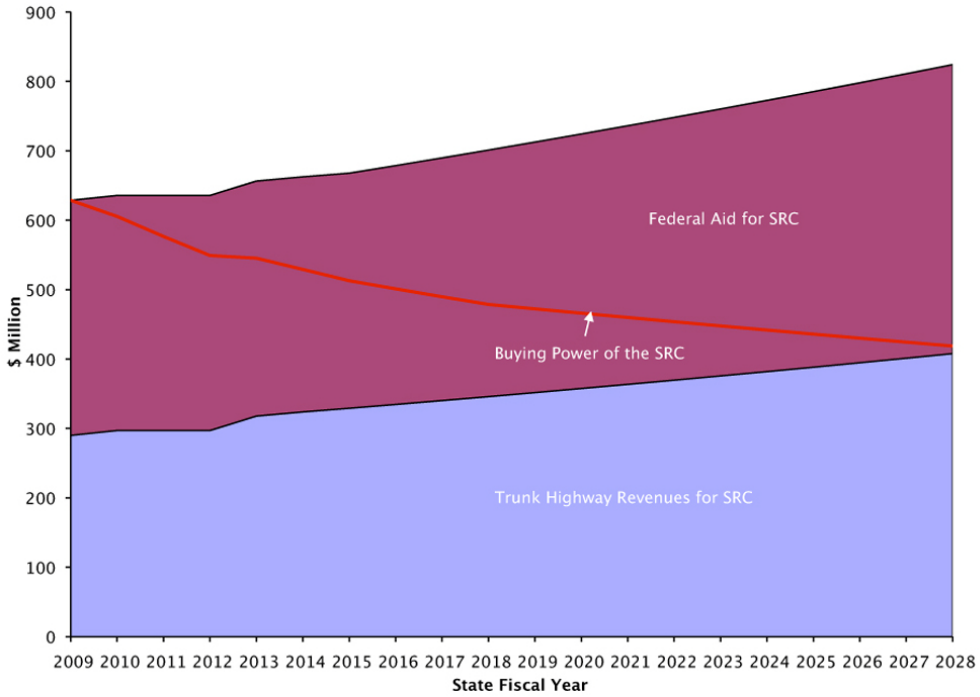


**Figure 5.9 State Road Construction (SRC) Revenues and Future SRC Buying Power**

*Source: Mn/DOT Office of Investment Management*

## Construction Costs

*Although cost increases have hit record levels in the recent past, it is assumed that supply and demand changes in the marketplace will lead to prices going back to normal levels.*

The highway construction cost inflation forecast was derived from the 20-year historical growth rate (1987 to 2007) of 3.9 percent per year. Although cost increases have hit record levels in the recent past, it is assumed that supply and demand changes in the marketplace will lead to prices going back to normal levels in the long run. The record level increases in construction material costs are not sustainable over the long run. For simplicity, it was assumed that construction cost increases will start declining from the current high price increases reaching three percent growth rates in the last 10 years of the planning period. In reality, costs will fluctuate from year to year with some years of very high cost increases and others of declining costs.

The impact of construction cost increases on the buying power of the projected revenues for the State Road Construction Program is shown in Figure 5.9. Since the projected rate of increase in construction costs is higher than the rate of increase for revenues, the buying power of the revenues in 2028 will be lower than in 2009.

## Chapter 152 Bond Funding

In addition to the revenues forecasted above, Mn/DOT's highway construction program, will be bolstered by the additional $1.7 billion in bonds authorized by Chapter 152. The bonds will be repaid over a 20-year period with the revenues raised by the increased state motor fuel tax and vehicle registration fees also authorized in the Chapter 152 legislation. Analysis of the additional revenues from these tax and fee increases made in the spring of 2008 indicated that Mn/DOT's share (62 percent) would be sufficient to cover the projected debt service on the bonds over the next 20 years and the increase to Mn/DOT's annual operating budget that was also authorized by Chapter 152. However, there would be no additional revenues remaining for the State Road Construction Program. The funding level provided to Mn/DOT's Districts for long-range planning purposes was increased to account for the anticipated bond funding of various projects over 2009 to 2018.

Figure 5.10 depicts the State Road Construction Program expenditure outlook for 2009 to 2028 given the additional bonding authorized through Chapter 152. It should be noted that the identified bond expenditures are based on the preliminary plan for the Tier 1 and 2 Bridge Improvement Program developed in June 2008. This investment plan will also be updated as the design and cost estimates of the major bridges in the program are further developed.

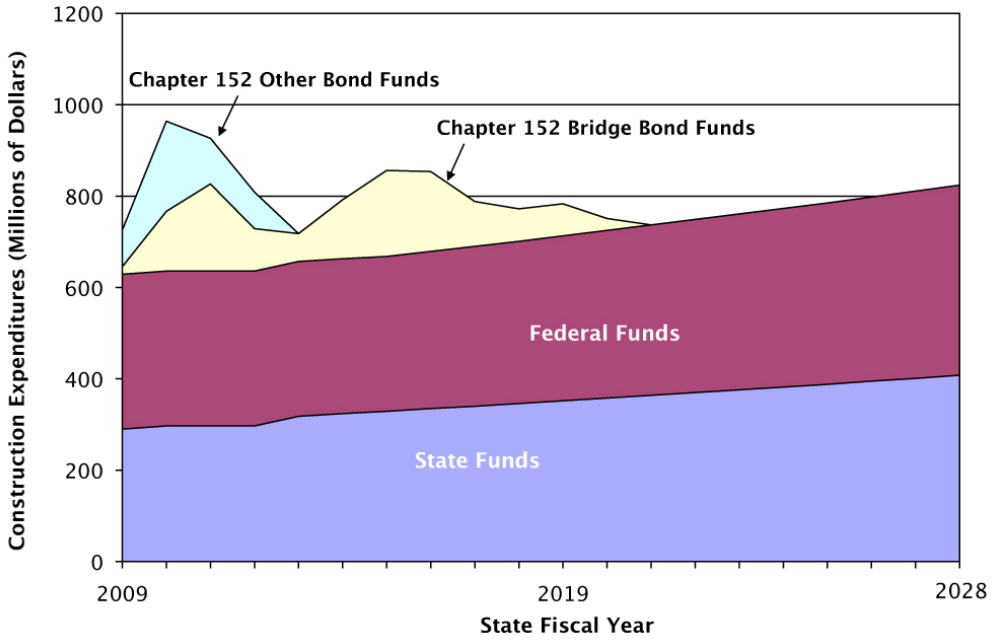


**Figure 5.10 Highway Construction Program Outlook including Chapter 152 Bonds**

*Source: Mn/DOT Office of Investment Management*

## Possible New Financing Mechanisms for Highways

*In the long run, revenues based substantially on a gas tax or MVST are not sustainable and run contrary to state and national energy conservation and environmental goals.*

While there is much uncertainty associated with the revenues and construction costs presented here, some of the underlying trends and their causes would suggest that there will not be a significant increase in revenues without structural or rate changes to the current sources of transportation funding. Also, the increased demand for infrastructure investments will continue to put an upward pressure on construction costs. In the long run, revenues based substantially on a gas tax or MVST are not sustainable and run contrary to state and national energy conservation and environmental goals. The backlog of transportation investments also makes it difficult to fund all the needed system improvements under a pay-as-you-go mechanism. Furthermore, technological improvements that enable efficient pricing of the system have increased interest in managing the system to maximize throughput, thus reducing the need to construct new highways. Some of the innovative funding and financing mechanisms currently in use or under consideration around the country are outlined below.

## Tolling

As more and more states face the mounting challenge of delivering highway projects with limited or diminishing revenue coupled with increasing construction costs, tolling has begun to receive greater consideration in nearly all quarters. There are two reasons to consider tolling in the transportation system: generate revenue and manage demand.

Although these reasons for tolling are not mutually exclusive, the distinctions are important because they can influence when and how tolls are used. When tolls are proposed to generate revenue, it is for the purpose of financing construction and operation of a facility. National experience has shown, however, that few tolling projects fully cover their development, financing, operations, and maintenance costs with revenue generated from tolls alone, implying that most toll-financed projects require some form of public subsidy.

*Congestion pricing helps transportation authorities better manage demand and achieve better performance from their system.*

Tolling to manage demand, also called congestion pricing, is not a means of raising revenue per se. Congestion pricing, however, helps transportation authorities better manage demand and achieve better performance from their system. This can delay or avoid investments that would otherwise be necessary to expand capacity to meet demand. In addition the revenue that is raised, beyond the costs of operations and enforcement, can be a motivating force especially if transit and high-occupancy vehicles, like carpools or vanpools, benefit.

In Minnesota, the I-394 MnPASS project has demonstrated how congestion pricing on the high occupancy toll lanes has allowed more cars to move through the same physical space and make more efficient use of the existing high occupancy vehicle (HOV) lanes. Conversion of the I-35W HOV lanes, part of the Urban Partnership Agreement to be implemented by fall of 2009, is the state's next congestion pricing project and will build on the innovations introduced on I-394. Along with the I-35W high-occupancy toll (HOT) lane conversion, Mn/DOT will introduce a new demand management pricing tool called priced dynamic shoulder lanes (PDSL) from 46th Street in south Minneapolis into downtown Minneapolis. The PDSL facility will be operated as a bus rapid transit and HOV/HOT lane only during the highest demand periods of the day and will function as a standard highway shoulder in off-peak periods. An advantage of this measure will be to provide lane continuity to the HOT lane system south of 46th Street without appreciably expanding the footprint of the existing roadway.

## Mileage-Based User Fees

Mileage-based user fees are a means to charge users based on how much a vehicle is driven. Although mileage-based charges can apply to public sector costs like taxes or to private sector costs like insurance or vehicle leases, this discussion will focus only on those fees associated with the public sector.

Since its inception in the 1920s, the gas tax has served as a pillar of the state and federal transportation revenue system. Many transportation experts believe that cracks are appearing in that pillar due to improved vehicle fuel efficiency and the increasing

prevalence of alternative fuel and electric powered vehicles. The result of these forces has been a flattening and declining of motor fuel tax revenue.

*Pressure is mounting to find more suitable means by which to capture road use fees.*

As a result, pressure is mounting to find more suitable means by which to capture road use fees. The mileage-based fee is commonly thought of as a replacement, or perhaps a supplement, for the motor fuel tax (or perhaps the registration fee). Motor fuel taxes are based on consumption of energy, which loosely translates to a per-mile fee. With a wide variation in fuel efficiency among today's vehicles, the per-mile fee ranges from four cents per mile for a vehicle that gets 10 miles per gallon to as low as one cent per mile for a vehicle that achieves 40 miles per gallon. Under the current motor fuel tax system, the more energy a vehicle consumes per mile, the higher the per-mile rate that is paid by the consumer. For more than a decade, transportation leaders and policy makers around the country have advocated converting or replacing the motor fuel tax with a mileage-based fee. Depending on how they are administered, mileage-based fees could be more economically efficient and fair than existing pricing practices. An important attribute of mileage-based fees is that it gives motorists a stronger price signal on a per unit basis of travel than consumers now get with the motor fuel tax.

*Mileage-based fees give motorists a stronger price signal on a per unit basis of travel than consumers now get with the motor fuel tax.*

Several states including Minnesota and the federal government have sponsored research and demonstrations that are testing the viability of the mileage-based fee. Additionally, The Netherlands is on track for the nationwide implementation of a mileage-based fee that will replace that country's registration system at the same time leaving in place their motor fuel tax.

## Innovative Finance

Interest in innovative transportation finance is growing throughout the country as states look for new ways to meet unprecedented transportation funding gaps and shortfalls. Mn/DOT is beginning to work with its transportation partners and stakeholders to explore new innovative finance concepts and options for maximizing limited transportation dollars, better aligning user costs with benefits, and delivering more transportation projects sooner.

Mn/DOT is currently establishing goals and developing a plan for this new innovative finance initiative. The plan will guide the department's exploration and assessment of innovative finance options and best practices, as well as its collaboration and outreach in this area. The plan will also guide the implementation and evaluation of innovative finance solutions and the integration of successful innovative approaches into the department's planning and project development processes.

Although, by itself, innovative finance will not close the transportation funding gap, it has the potential to be an integral part of the solution. Solving the transportation funding puzzle in the future will require numerous funding sources and financing techniques and will involve transportation partners and stakeholders. Greater diversification of funding sources and techniques will improve the overall health of transportation funding for generations to come.

## Public-Private Partnerships

Traditionally, private sector participation in transportation has been limited to separate planning, design, or construction contracts on a fee-for-service basis, based on the public agency's specifications. Expanding the private sector role through public-private partnerships (PPPs) may allow public agencies to tap private sector technical, management, and financial resources in new ways to achieve agency objectives such as greater cost and schedule certainty, innovative technology applications, specialized expertise, or access to private capital.

Under PPP agreements, both the public and private sector share risks and rewards in developing and operating transportation projects or programs. PPPs are often seen as a means to gain greater efficiency in program or project delivery or as a means to accelerate development of projects. There are many forms of PPPs that populate a continuum from fee-based contract services to full asset sales. Figure 5.11 illustrates that the variety of partnership options that have been employed around the U.S. and the world.

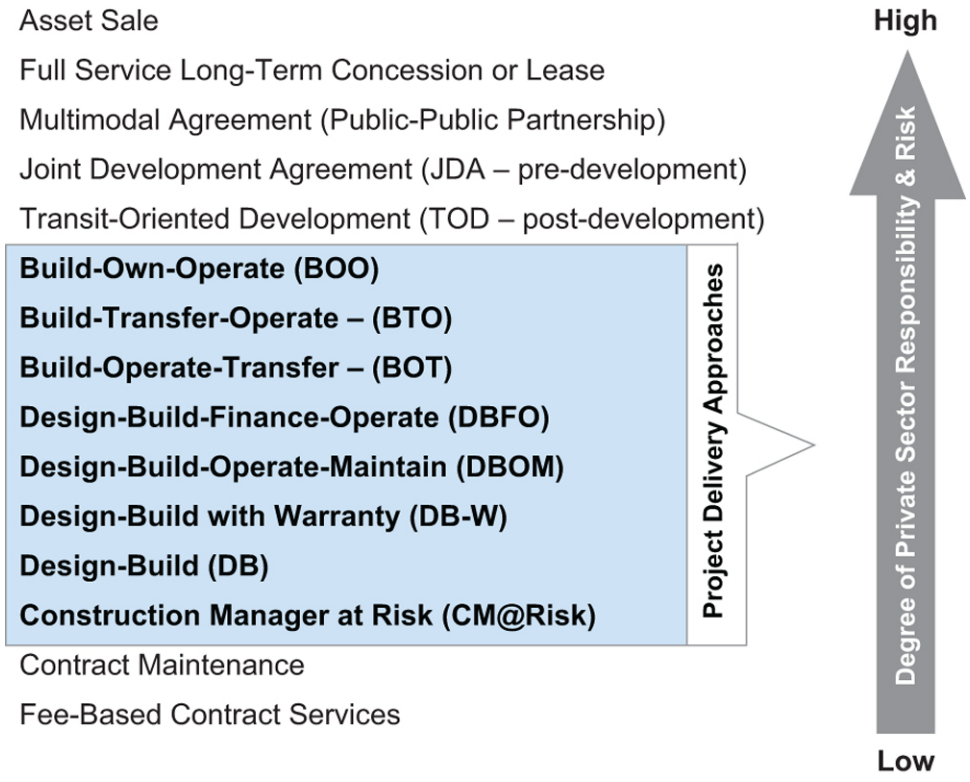


**Figure 5.11 Public-Private Partnerships Continuum**

*Source: Cambridge Systematics*

Within the continuum of project delivery approaches, options range from construction management to build-own-operate agreements. Minnesota has had a great deal of experience with design-bid-build projects that are on the lower end of the continuum; however, the state has had no experience with build-own-operate tolling concessions.

Mn/DOT plans to explore ways the private sector can help deliver more transportation improvements quickly.

## Bonding

Traditional transportation bonds are issued by state and local government entities to finance various projects and their associated expenses. A bond is a written promise to repay borrowed money on a schedule and at a fixed rate over a period of time.

State general fund bonding to raise revenues for local bridge projects has been a traditional source of transportation funding in Minnesota. However, bonding with the anticipated receipts of the State's Trunk Highway Fund revenues to develop or accelerate transportation projects is relatively new.

## Emissions Fees

*Mileage-based emission fees that reflect each vehicle's emission rates are receiving greater consideration in both government and the private sector.*

Mileage-based emission fees that reflect each vehicle's emission rates are receiving greater consideration in both government and the private sector as concerns over global warning grow. If implemented, emissions fees would give motorists with higher polluting vehicles a greater incentive to reduce their mileage or purchase vehicles that emit less pollution. Motorists who must drive high mileage will be given an incentive to choose less polluting vehicles. There are a number of ways that this might work. For example, an older vehicle that lacks current emission control equipment might be charged a five cent per mile fee, while a less polluting vehicle could pay one cent per mile. A vehicle that qualifies as an ultra-low emitting may receive an even greater discount.

It is possible that this concept could result in large vehicle emission reductions and simultaneously significant reductions in vehicle miles of travel (VMT). Although emissions fees may result in a new source of revenue, it is not clear how the trade-off between reduced VMT and this new source of revenue would impact the total transportation funding picture. In addition, there is likely to be a significant cost for enforcing such a program.

## Weight-Distance Charges

*Weight-distance fees are a mileage-based road use charge that increases with vehicle weight.*

Weight-distance fees are a mileage-based road use charge that increases with vehicle weight. If implemented according to the 1997 Federal Highway Administration (FHWA) Road User Fee Task Force recommendation fees could range from about 3.5 cents per mile for automobiles up to 20 cents per mile for combination trucks. It has been argued that this is a more equitable way to fund roads than fuel taxes, because it can more accurately represent the roadway costs imposed by individual vehicles.

Oregon is the only state that presently has a weight-distance charge for heavy trucks.

# Transit Funding in Minnesota

Public transit funding in Minnesota is derived from a combination of state, local, and federal funds. In Minnesota, federal and state transit funds are administered by two governmental jurisdictions – Mn/DOT for the 80-county geographic area of Greater Minnesota and the Metropolitan Council for the seven-county Twin Cities Metropolitan Area (TCMA). The sections below outline the funding sources for each of these entities.

## Federal Transit Funding Programs

The federal funding programs are administered by the Federal Transit Administration (FTA). The Federal Transit Account receives from the federal motor fuel tax (2.8 cents per gallon) and the General Fund appropriations. Mn/DOT and the Metropolitan Council receive and administer federal funds. In general, FTA distributes operating and capital program funding based on the population of urban and rural areas. Table 5.1 shows the level of federal funding allocated to the various programs in SFY 2007.

**Table 5.1 Examples of Federal Transit Funds Received in Minnesota by Program**

| Federal Transit Fund Program | Funds Allocated to Minnesota in Fiscal Year 2007 |
|---|---|
| Special Needs for Elderly Individuals and Individuals with Disabilities Program (Section 5310) | $1,751,132 |
| Non-urbanized Area Formula Program (Section 5311) | $11,178,461 |
| Job Access and Reverse Commute (Section 5316) | $1,270,642 allocated as follows:<br>– Twin Cities Metropolitan Area: $752,458<br>– Greater Minnesota Metro areas: $243,496<br>– Other areas in Greater Minnesota: $494,688 |
| New Freedom (Section 5317) | $980,199 allocated as follows:<br>– Twin Cities Metropolitan Area: $524,419<br>– Greater Minnesota Metro areas: $142,564<br>– Other areas in Greater Minnesota: $313,216 |
| Urbanized Area Formula Program (Section 5307) | $5,052,284 (Greater Minnesota only) |

*Source: Mn/DOT Office of Transit, 2007*

In addition to these programs, funds are made available for specific projects from the various discretionary programs. An example of a discretionary program is the New Starts Capital Improvement Program. This provides funds for the construction of new fixed transit systems or extensions to the existing systems or for high occupancy vehicles. Examples of this funding would be the Central Corridor light rail and the Northstar Commuter Rail projects. Furthermore, certain federal highway funds can be used for transit purposes.

## Greater Minnesota Transit Funding

Federal, state, and local revenues presently support transit funding in Greater Minnesota. Figure 5.12 illustrates the sources and levels of transit operations funds from 2000 to 2008, where 2007 and 2008 are the authorized budget levels. The local funding is from local taxes and fares.

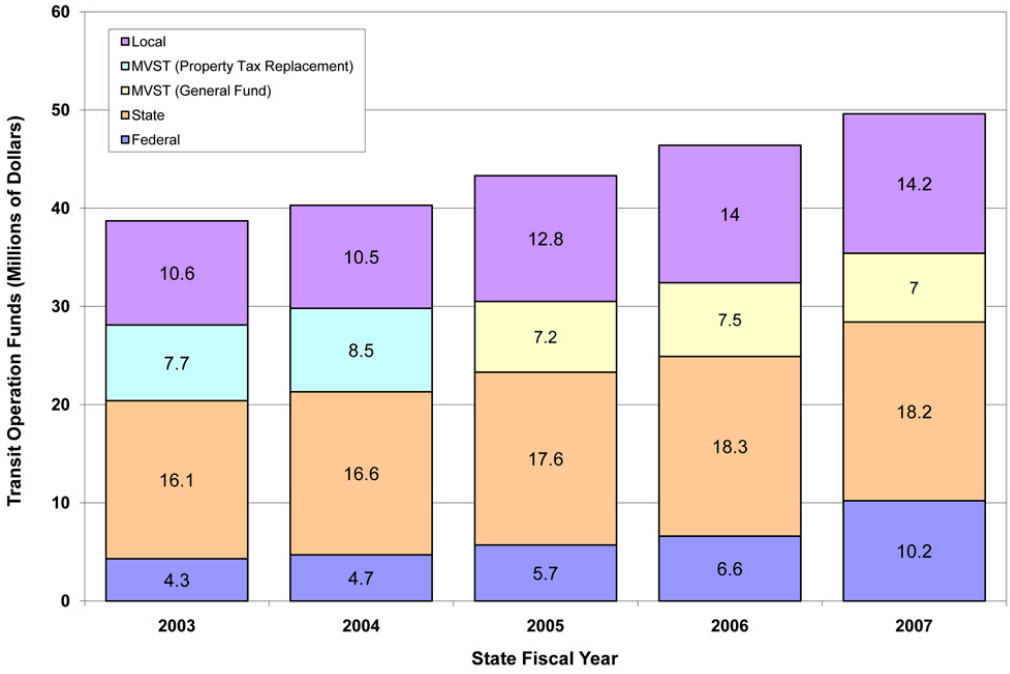


**Figure 5.12 Greater Minnesota Transit Operations Revenues**

*Source: 2007 Minnesota Transit Report, Mn/DOT Office of Transit*

Greater Minnesota transit operating revenue has increased in recent years. It was $38.7 million in 2003 and increased to $49.6 million in 2007. During this time federal funding increased from $4.3 million in 2003 to $10.2 million in 2007. Local share has also increased over time. Transit in Greater Minnesota will receive additional funds as a consequence of the changes following the MVST legislative amendment. In 2008, 1.8 percent of MVST will be available for Greater Minnesota transit, increasing to four percent in 2012.

Table 5.2 shows the Greater Minnesota transit appropriations for the 2008 and 2009 biennium. This includes some funds for the capital program.

**Table 5.2 State Appropriations for Greater Minnesota Transit, 2008-2009 Biennium**

| Fund/Program | 2008 | 2009 | Total |
|---|---|---|---|
| Public Transit Assistance - General Fund | $21,735,000 | $19,248,000 | $40,983,000 |
| Capital Assistance | $1,000,000 | $1,000,000 | $2,000,000 |
| Greater Minnesota Transit Fund - MVST | $7,446,000 | $9,116,000 | $16,562,000 |
| **Total** | $30,181,000 | $29,364,000 | $59,545,000 |

*Source: 2007 Minnesota Transit Report, Mn/DOT Office of Transit*

## Twin Cities Metropolitan Area Transit Funding

Currently the four main sources of funding for transit operating costs in the TCMA are fares, federal grants, state appropriations, and state MVST revenue.
Figure 5.13 illustrates transit funding by source from 2000 to 2008, where 2007 and 2008 are the authorized budget levels. Prior to 2002, almost 50 percent of transit operating cost was funded by property taxes. In 2001, legislation replaced property tax revenue with MVST revenue resulting in a sharp drop in transit funding in 2002 due to MVST being allocated on a fiscal year basis and property tax on a calendar year basis. The transition caused six months of lost revenues for transit.

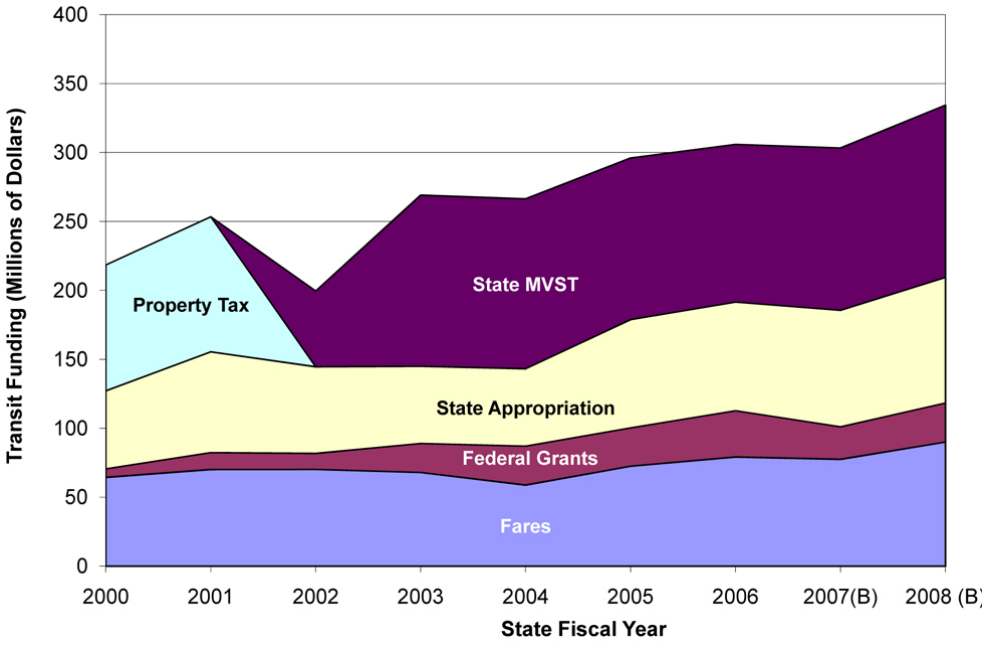


**Figure 5.13 TCMA Transit Operations Funding Sources**

*Source: Metropolitan Council 2007 Transit System Performance Evaluation*

Funding for transit in the TCMA has increased by 53 percent in absolute terms since 2000. The increase largely occurred due to increased funding from state appropriations and federal grants as well as an increase in estimated fare box receipts in 2008. At present, the share of funding from each of the state sources is about equal.

*The revenues from MVST have declined by five percent since 2003.*

The shift from property tax revenue to MVST revenue for transit appears to have created more volatility in funding. The revenues from MVST have declined by five percent since 2003. The MVST revenues may be more susceptible to economic changes than property taxes.

Recent increases in ridership have bolstered fare box receipts, increasing the share of revenue anticipated from this source.

Table 5.3 lists the state appropriation for the 2008-2009 biennium (operating and capital programs).

**Table 5.3 State Appropriations for Metro Transit, 2008 to 2009 Biennium**

| Fund/Program | 2008 | 2009 | Total |
|---|---|---|---|
| Public Transit Assistance - General Fund | $93,543,000 | $73,453,000 | $166,996,000 |
| Hiawatha LRT Operations | $5,300,000 | $5,300,000 | $10,600,000 |
| Metro Transit Fund - MVST | $119,136,000 | $144,550,000 | $263,686,000 |
| **Total** | $217,979,000 | $223,303,000 | $441,282,000 |

*Source: 2007 Minnesota Transit Report, Mn/DOT Office of Transit*

Local funding is also used to fund transit operating costs in the TCMA. In 2007, $107.3 million came from local funding sources, accounting for 32.8 percent of the total metropolitan transit operating costs. This share may change to some extent following the 2008 Legislative session, which included legislation giving counties the authority to levy a 0.25 percent sales tax to fund transit programs if approved locally through a referendum vote.

## Bicycle and Pedestrian

Funding for bicycle and pedestrian facilities in Minnesota presently comes from a mix of local, state, and federal sources. The Mn/DOT Office of Transit Bicycle and Pedestrian Section is working toward developing a tracking mechanism for local projects and presently tracks state and federal funding. It also provides technical assistance to state agencies and local authorities for bicycle and pedestrian system planning, capital improvement projects, and maintenance.

At the federal level, the Intermodal Surface Transportation efficiency Act of 1991 established an “enhancement” category for projects that are funded with a percentage of the Surface Transportation Funds (STP). The STP funding included a minimum apportionment provision over the life of the act of 10 percent for enhancement activities. Twelve project categories are considered enhancement activities, including construction of pedestrian and bicycle facilities, and safety and education for bicyclists and pedestrians. In Minnesota, the Area Transportation Partnerships (ATPs)

are asked to program enhancement projects. As illustrated in Table 5.4, bicycle and pedestrian-related enhancement projects are anticipated to comprise the largest source of funding in the 2009-2012 STIP.

**Table 5.4 Bicycle-Pedestrian Programs and Funding for Projects in the 2009-2012 STIP**

| Fund/Program | Total ($) | Project Selection Authority | Share of State Bicycle-Pedestrian Investment (%) |
|---|---|---|---|
| STP | 912,100 | ATPs | <1 |
| STP Urban Guarantee (apportioned by Congress directly to the MPO) | 18,195,400 | Met Council | 11 |
| State Funds | 348,000 | Mn/DOT | <1 |
| STP Enhancements | 98,083,394 | ATPs | 58 |
| STP Enhancements - High Priority Projects | 5,164,712 | Congress | 3 |
| STP Enhancements - Federal Fund Miscellaneous | 1,586,000 | FHWA | <1 |
| Safe Routes to School | 2,969,584 | Mn/DOT | 2 |
| Recreational Trails | 1,313,464 | DNR | <1 |
| Other High Priority Projects | 21,904,513 | Congress | 13 |
| Other Federal Fund Miscellaneous | 18,459,700 | FHWA | 11 |
| **Total** | **168,936,867** | | **100** |

*Source: Mn/DOT Office of Transit – Bicycle and Pedestrian Section*

# Aeronautics

The Mn/DOT Office of Aeronautics is responsible for planning the state system of airports outside the TCMA. The Legislature has designated the Metropolitan Council as the aviation system planning agency for the seven-county TCMA. The Office of Aeronautics provides financial and technical assistance to Greater Minnesota airports for planning, capital improvement projects, and maintenance. The Metropolitan Airports Commission, which owns the Minneapolis-Saint Paul International Airport and six reliever airports, has its own sources of funding (e.g., landing fees, concessions, parking fees, hangar rentals, etc.) and provides its own funding for most of the projects at its seven airports.

## State Airports Fund

Minnesota Statutes, Chapter 360, established the State Airports Fund. The revenues in the fund are derived from the following aviation user taxes:

- **Airline Flight Property Tax:** A tax paid by the airlines in lieu of other taxes on their flight property.
- **Aviation Fuel Tax:** A tax paid by all aviation fuel users.
- **Aircraft Registration:** An annual licensing fee for civil, non-airline aircraft based in Minnesota and those operated in the state for more than 60 days per year.
- **Investment Income:** State airports fund money invested in securities by the state board of investment.

Figure 5.14 shows the amount of revenues collected from the different state sources for fiscal years 1999 to 2007. The sharp decline in revenues in 2006 resulted from the bankruptcy filings of Northwest, Delta, Mesaba, and Comair airlines.

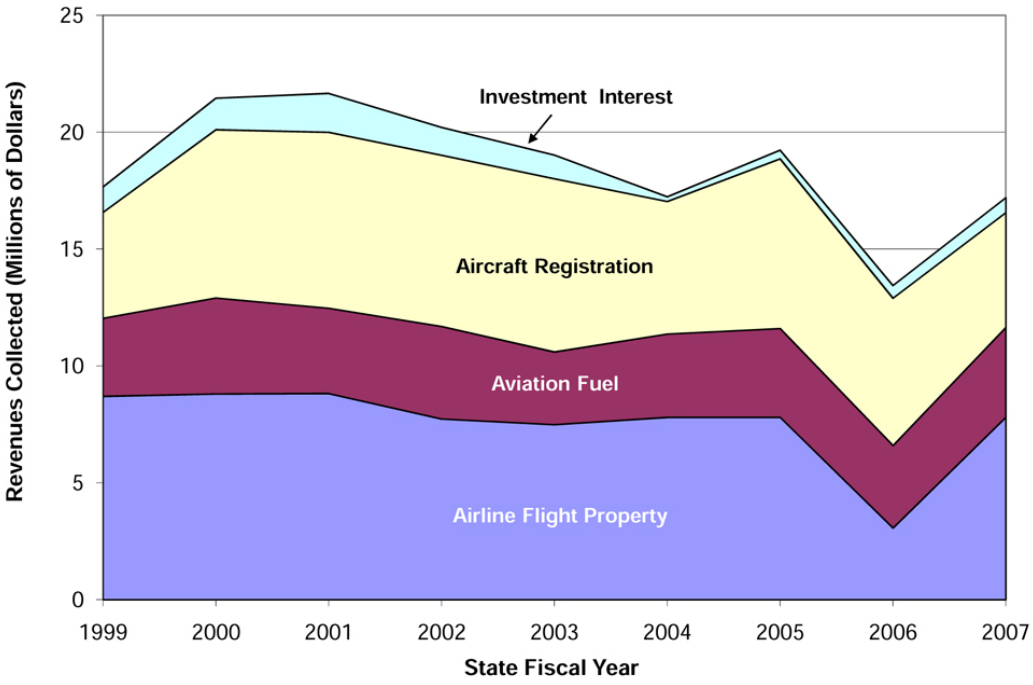


**Figure 5.14 State Airport Fund Revenues**

*Source: Mn/DOT Office of Aeronautics*

Expenditures from the State Airports Fund are distributed via the programs listed in Table 5.5. Airport grant-in-aid eligibility includes complying with ownership, license, state airport system, and airport safety zoning requirements. Eligible airport projects include, but are not limited to, planning, land acquisition, paving, lighting, navigational aids, obstruction removal, equipment purchase, fencing, noise mitigation, and some airport buildings. Each year more projects are identified in municipality Airport Capital Improvement Plans than are able to be funded.

**Table 5.5 State Funded Programs for Aviation**

| State Airports Fund Programs | Annual Value ($) (approximate) | Purpose |
|---|---|---|
| Airport Capital Improvement Program | $10,400,000 | Grants focus on safety improvements, preserving existing aviation infrastructure, navigational aides, and coordination of air travel with surface modes. |
| Airport Maintenance and Operations Program | $3,900,000 | Reimburses a portion of airport operation costs incurred, based on existing infrastructure. |
| Hangar Loan Program | $4,400,000 | Buildings generate revenue for airports and provide protection and security for the aircraft fleet. The Revolving Account is replenished by loan payments. |
| Air Service Marketing Program | $200,000 | Vital economic development tool. Encourages preservation or expansion of airline service. |

*Source: Mn/DOT Office of Aeronautics*

## Federal Funds - Aviation Trust Fund

Federal funding for aeronautics programs comes from the Aviation Trust Fund. Revenues in the trust fund come from taxes on users of the aviation system: the airline ticket tax, federal aviation fuel tax, and an excise tax. Airport Improvement Program (AIP) funds are appropriated by Congress from the Aviation Trust Fund.

Federal Aviation Trust Funds are distributed through the Airport Improvement Program (AIP) as determined by Congress. Historically, Minnesota airports have received federal funds totaling approximately $70 million per year from the 3 categories of AIP funds.

1. Entitlements - amounts ranging from $150,000 at general aviation airports to $1 million at Minnesota's three largest commercial service airports (Minneapolis/St. Paul, Rochester, and Duluth).

2. Apportionment - the state receives a federal formula apportionment amount of approximately $5.2 million per year. These project funds are prioritized by Mn/DOT Aeronautics and the FAA.

3. Discretionary – a variable amount of federal discretionary funds is available each year based upon national competition and FAA priority.

## Passenger Facility Charge

Since 1990, airports with scheduled passenger service have been allowed to impose a Passenger Facility Charge (PFC). The airport owner imposes the charge on enplaning passengers for a specific project and the fee is collected by the airline. The Federal Aviation Administration must approve the collection of all PFCs. The PFCs can be used to offset specific capital improvement costs, including the local matching share for federal grants.

# Rail

The State of Minnesota does not own or operate railroads. Mn/DOT has worked in cooperation with the state's counties, cities, townships, and railroads to improve the railroad-highway infrastructure in order to support economic growth and connect Minnesota to global opportunities. State involvement in rail projects includes federal and state funds combined with private money provided by railroads and rail users. State rail investment programs include the following:

## Minnesota Railroad – Highway Grade Crossing Safety Improvement Program

*Under SAFETEA-LU approximately $5.7 million per year have been apportioned for rail safety projects in Minnesota.*

The goal of this program is to save lives at grade crossings. Most of the projects under this program have been funded using federal funds with matching state, local, and railroad funds. Federal funds have been apportioned to the State of Minnesota each year since 1974. Under SAFETEA-LU approximately $5.7 million per year have been apportioned for rail safety projects in Minnesota. State funds are available to match the federal funding for this program at the required 10 percent contribution.

## Minnesota Rail Service Improvement Program

The MRSI Program was established in 1976 to help prevent the loss of rail service on lines potentially subject to abandonment by railroads. Bond funding of $2.5 million and $3.7 million was appropriated for the MRSI Program by the Minnesota legislature in 2005 and 2006 respectively.

Figure 5.15 shows the share of funding from different sources. Of the $130.2 million invested in the MRSI Program from 1978 to 2007, 60 percent has been funded by state revenues.

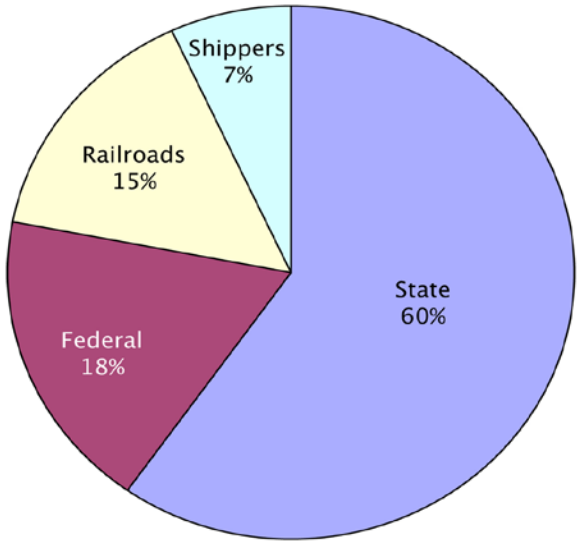


**Figure 5.15 Minnesota Rail Service Improvement Program Funding Sources**

*Source: Mn/DOT Office of Freight and Commercial Vehicle Operations*

The MRSI Program provides funding for projects in the categories listed below:

- Rail Purchase Assistance Program
- Rail Rehabilitation Program
- Capital Improvement Loan Program
- Rail User and Rail Carrier Loan Guarantee Program
- State Rail Bank Program

## Waterways

*From 1996 to 2007, Minnesota invested $17.5 million in port improvements.*

The State of Minnesota does not own or operate any waterway facilities. Local port authorities own and operate the ports funded through fees charged to the carriers.

In 1991, the Minnesota Legislature passed the Minnesota Port Development Assistance Program, which was designed to aid the public ports in modernizing their physical infrastructure. The program was first funded in 1996 at $3 million by bonds. As of December 2007, the state has appropriated a total of $17.5 million for this work. The funding is from the state General Fund revenues and bonds.

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[1] *Highway Statistics 2006*, U.S. Department of Transportation, Federal Highway Administration.

[2] *Local Government Own Source Spending on Roads and Streets*, Minnesota House of Representatives, Research Department, 2007.

[3] Advanced construction is an innovative financing tool that allows states to let multiple year projects by authorizing state funds in anticipation of future federal funds.