

# LOSINGGROUND

A REPORT ON THE STATE OF MAINE'S HIGHWAY FUND



JULY 2005

MAINE BETTER TRANSPORTATION ASSOCIATION

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## EXECUTIVE SUMMARY

Maine's investment in its highway system is losing ground. Public investment in Maine's highway system peaked decades ago, and yet growth in highway travel has accelerated. Today's highway users are consuming the investments of the generations that came before them, coasting along in an unsustainable fashion. Like driving on a road with a cosmetic guardrail, the public has a false sense of security. The state continues to underfund highway improvements from year to year and relies too heavily on stopgap maintenance strategies, largely unaware of the flaws gathering in their highways and bridges.

Consider that even the Maine Department of Transportation (MaineDOT) has been caught unaware. The discovery of extensive deterioration in the main cables of the Waldo-Hancock Bridge created an emergency forcing MaineDOT to respond quickly, placing restrictions on the use of the bridge, undertaking temporary emergency repairs and, now, rapidly implementing construction of a replacement bridge. The price of neglect in just this one situation has sent financial shockwaves throughout the entire MaineDOT budget, further deferring much needed highway improvement projects statewide.

Since the 1970s, transportation investment has slipped dramatically as a state budget priority. The predicament is one compounded by the effects of inflation, federal funding inequities and rapidly escalating highway use. This picture is further complicated by the anticipated collapse of the motor fuel tax as dramatic increases in auto fuel efficiency come on line. Finally, there are concerns that our changing patterns of settlement away from urban centers will escalate demands for rural road

**“The condition of the state roads leading to our campus is a significant safety concern for me, our students and employees and their families. This is a message I have taken to the MaineDOT many times and I am grateful for the improvements that have been made recently.”**

*- Leonard H. Tyler, President,  
Maine Maritime Academy*

improvement even as aging urban roads demand attention. This entire scenario translates into a threat to the economy, public safety and the environment.

With decades of falling investment and neglect of Maine's transportation assets, the ever demanding highway users must ask the question, “Do I feel lucky?” They must begin to insist that their elected leaders put in place policy and fiscal reforms that respond to these growing challenges. In this report, needs are documented, the financial picture is explained and a series of corrective measures are explored. To meet the challenges before us, a team effort will be required that engages all levels of government and brings the private sector into the deliberations and crafting of solutions. This is not an impossible task, but it will take public commitment to transportation comparable to that displayed between the onset of the Great Depression and the completion of the Interstate.

## LOSING GROUND

### A RISING TIDE OF HIGHWAY USE

A relatively modest increase of 30% in the state's population over the past 30 years gives little idea of the pressures facing drivers and highway planners today and in the near future. Sprawling patterns of development, just-in-time inventory requirements and higher rates of driver licensing have exploded highway demand. Maine has more cars and more drivers per household, and households are ever more scattered across the landscape, further away from work, shopping and public attractions.



MaineDOT photo

Routes 2 and 201 in Skowhegan. Costs for "extraordinary" highway projects in South Portland, Bangor, Skowhegan, Eddington, Aroostook County and at the St. Stephen/Calais border crossing will exceed \$1 billion.

Here's a snapshot of what has happened:

- In 1970, there were 500,000 licensed drivers in Maine. Today there are 920,000.
- The number of registered motor vehicles increased from 500,000 in 1970 to 1.4 million today — more than one vehicle per person.
- Vehicle miles of travel grew 95% between 1970 and 1990 and another 19% between 1990 and 2000 to reach 14.3 billion vehicle miles of travel.
- The proportion of Maine freight shipped by road has increased from 65% in 1982 to 87% today.
- More than 95% of all passenger movements in Maine take place over roads.

### DECLINING HIGHWAY USER SUPPORT

Maine funds improvements to its highway system through user fees collected in the Highway Fund. With this user fee approach, increases in use would reasonably be expected to result in increased funding sufficient to address our needs. That has not occurred because inflation and improved fuel efficiency have conspired to dramatically reduce the value of the motor fuel tax that funds roughly two-thirds of the state's Highway Fund.

Long-term inflationary trends have greatly lowered user contributions to Maine's highway network. In

1927, Maine's motor fuel tax was set at 4¢ per gallon of gas. In today's dollars, that would be 42¢ per gallon. Historically, fuel use fees remained stable from 1927 to 1971 when the inflation adjusted value ranged between 40¢ per gallon and 49¢ per gallon, with the peak occurring in 1947. For the last twenty years the inflation-adjusted value of the tax has remained in the 24¢ to 27¢ per gallon range. Assuming an average decline in the state's level of effort of 20¢ per gallon in tax over the past twenty years, Maine has reduced its financial commitment to highway transportation during this period by more

## MAINE'S HIGHWAY FUND

Maine is among more than 40 states with a dedicated fund to finance construction and maintenance of major roads and bridges. In the 1920s, Maine began allocating all funding from motor fuel taxes to the dedicated Highway Fund. It was part of a nationwide effort to create better roads in recognition that the automobile had become a necessity.

At about the same time, the first federal route system was devised, including such famous roads as Routes 1 and 2, in Maine. Until the advent of the Interstate Highway System in 1956, though, all gasoline and excise taxes were imposed by state and local governments.

The dedication of fuel taxes — gasoline and diesel — plus “fees, excises and license taxes relating to registration, operation and use of vehicles on public highways” is contained in Article IX, Section 19 of the Maine Constitution. Highway Fund revenues will amount to about \$311 million in the current fiscal year. About 69% of Fund revenues come from fuel taxes. The majority of remaining revenues are from motor vehicle registration, title, and driver's license fees, as well as fines and penalties.

In 2004 Maine raised 25.2 cents per gallon on gasoline and 26.3 cents per gallon on diesel fuel which is included in the pump price.

About 80% of the Fund finances the planning, design, construction and maintenance of highways and bridges. Some 63 percent of the State Police budget is funded with Highway Fund dollars, as is most of the Secretary of State's Motor Vehicle Division.

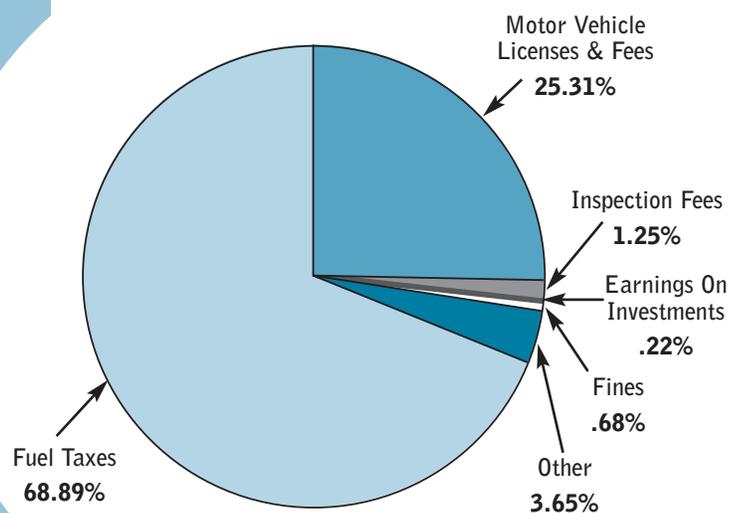
The Highway Fund, designated for MaineDOT, is administratively and financially separate from the Maine Turnpike Authority, which operates a 106-mile toll road. The two agencies do cooperate on cost-sharing, however, and also are working together on joint projects, such as new turnpike interchanges.

than \$3 billion when compared to the effort of preceding generations. These dollars, had they been available, would have largely been spent on capital improvements that would have strengthened the economy.

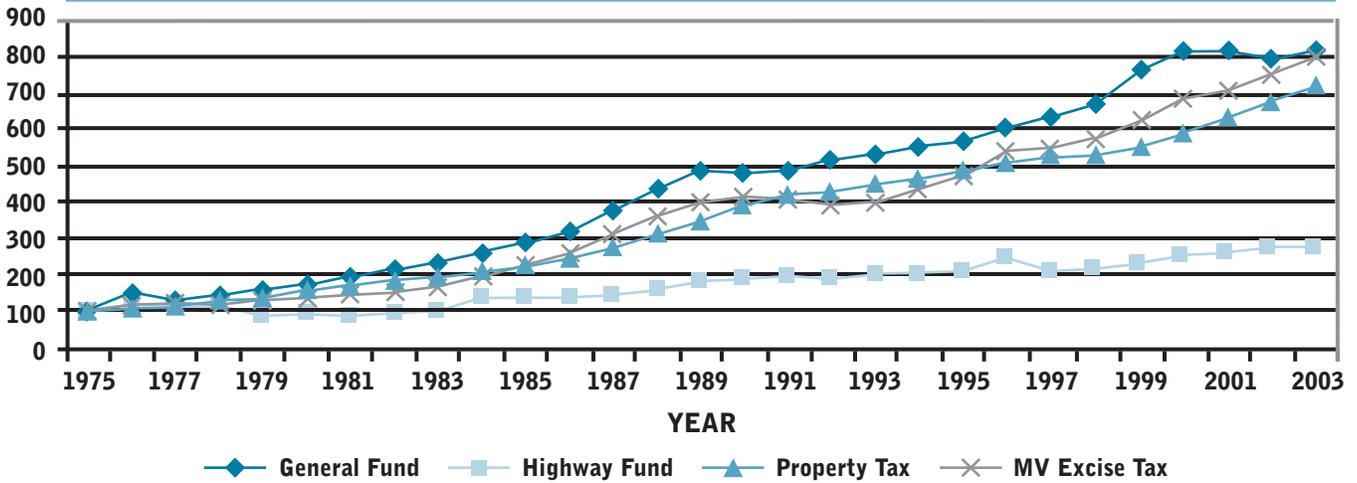
A similar but less dramatic decline in motor fuel tax revenues has occurred at the federal level. That tax, as adjusted for inflation, peaked in 1959 and today has lost nearly one-third of its value. Unlike in the State of Maine, this decline in revenues has been offset by Congress setting appropriations at levels that have generally kept pace with inflation.

Inflation is not the only factor in the diminishing financial resources for our highways. Between 1985 and 1995, MaineDOT documented a near 38% growth in travel but only a 19% growth in fuel consumption. When the fuel efficiency of passenger vehicles rises, more travel can be provided for the same per gallon tax. So not only is the inflation adjusted value of the motor fuel tax declining, a compounding effect has occurred due to rising fuel efficiency that allows greater use at less cost per mile in taxes.

**HIGHWAY FUND  
BUDGETED REVENUE**



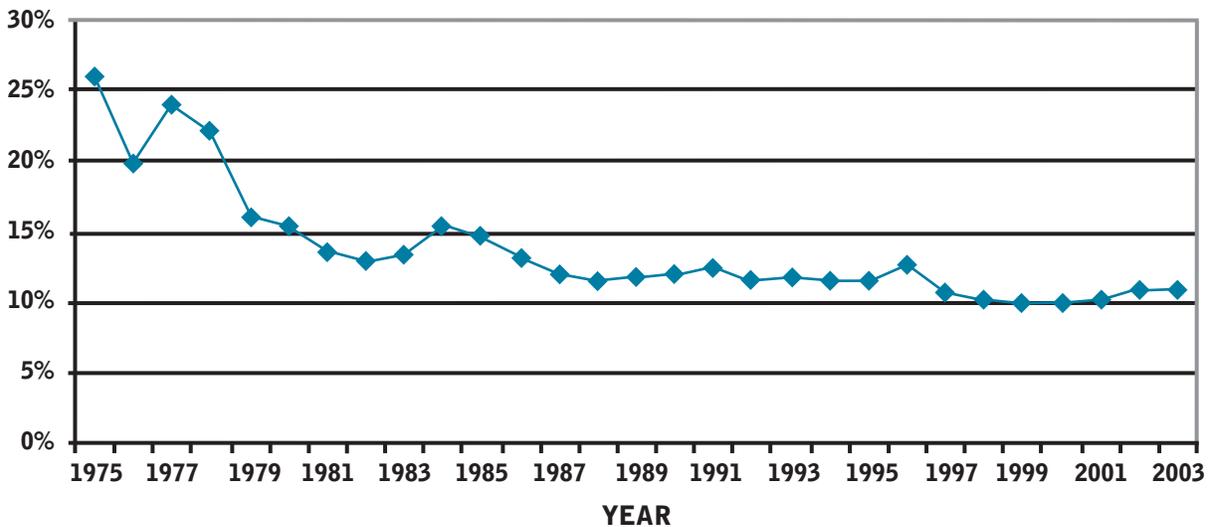
### REVENUE GROWTH: HIGHWAY FUND VS. OTHER



Viewed in the larger context of total state and local revenues, the declining rate of transportation investment is even more dramatic. Except in recent years, Maine has financed highway transportation exclusively from Highway Fund revenues. As the accompanying chart indicates, Maine's reliance on the Highway Fund placed transportation investments largely off the table in the competition for other state and local resources that were growing much more rapidly. Between 1975 and 2003, state General Fund revenues grew 712%, while local property tax revenues increased 612% and the motor vehicle excise tax, which is a local General Fund revenue, rose

698%. During this 28-year period, state Highway Fund revenues grew by a mere 178% -- less than one-third the rate of growth of other major state revenues. As a consequence of these varying revenue growth rates, transportation became a declining priority in state government spending. In 1976, state investments in highway transportation represented 26% of all state spending. Today, only 11% of state spending goes to transportation. (See chart below.) Simply put, the Highway Fund has not kept up with inflation while fast-growing General Fund revenues are largely unavailable for transportation investment.

### HIGHWAY FUND AS A PERCENTAGE OF STATE REVENUES 1975-2003



## A GROWING BACKLOG OF NEEDS

**“Maine's forest products industry needs good roads. Fixing a road like Route 11 in Aroostook can save haulers millions of dollars a year.”**

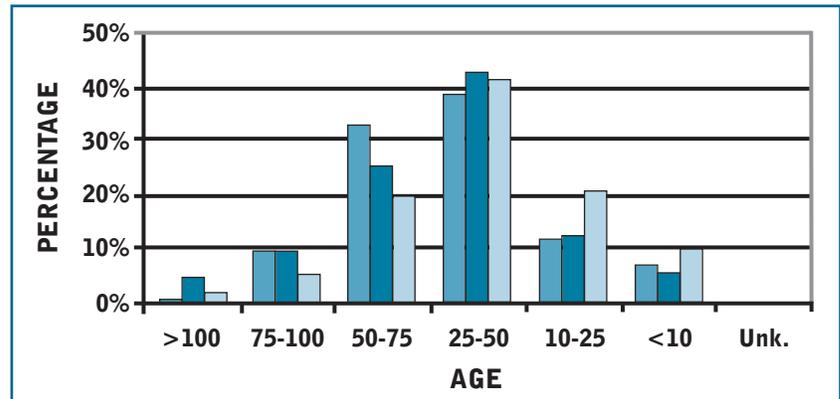
- Dan Levesque, *Fraser Paper*

A day of reckoning is approaching. Presently, nearly 4,000 miles of state roads have yet to be rehabilitated to modern day standards. In fact, that many miles of state roads have not been rehabilitated in over 50 years. With 8,327 miles under state jurisdiction, and in spite of such a large backlog of rehabilitation needs, highway rehabilitation almost came to a standstill in the 1990s. At the same time, the state's minor collector network of 2,240 miles was all but abandoned for rehabilitation work from the late 1980s until the late 1990s. The real life impacts of this neglect are that up to 2,000 miles of road have to be posted each year to restrict weight allowances. Posting is necessary, because these roads lack the structural strength to carry heavier truck traffic. Posting adversely affects Maine's rural economy, because commerce that expects to travel over these roads cannot.

Maine's bridge inventory needs have become an even greater concern. With 2,741 bridges exclusively under MaineDOT jurisdiction, 1,048 are older than 50 years placing Maine ahead of New England and well ahead of the country in the

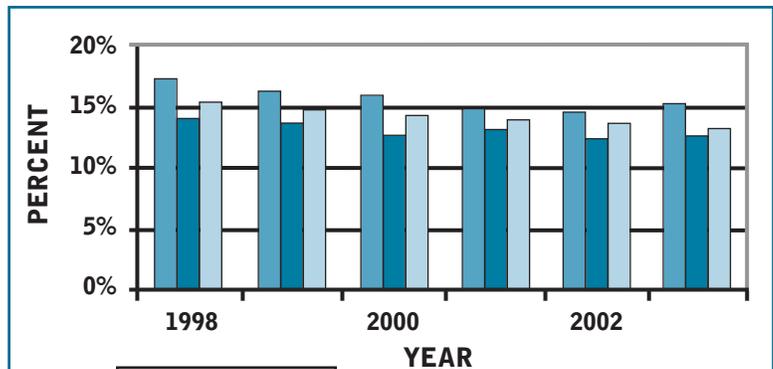
percentage of aging bridges. While Maine has made progress at reducing the percentage of bridges rated as structurally deficient over the past six years, the state still has a higher percentage than New England and the national averages. Furthermore, the federal government has rated 35% of Maine's bridges as eligible for federal aid for rehabilitation or replacement because of their deteriorated condition. The national average is only 26%.

### AGE DISTRIBUTION OF BRIDGES



■ Maine ■ New England ■ National

### PERCENT STRUCTURALLY DEFICIENT BRIDGES



■ Maine  
■ New England  
■ National

**“By diverting through traffic onto the new Merrymeeting Bridge, Topsham's village center is now experiencing a revival as a place for people to live, work and recreate. Road improvements such as that one can restore the attraction of community centers as a place for homeowners and local businesses to invest.”**

*- David A. Fuller, Executive Director,  
Topsham Development Inc.*



MaineDOT photo

Patching pavement on Route 9. Maine spends a disproportionate share of its highway funding on maintenance.

With the exception of extraordinary bridges, those costing in excess of \$5 million, the state is making no perceptible progress in tackling the ever-growing bubble of bridge needs. Like road rehabilitation, the intensity of the effort required to address these needs only gets greater the longer they are neglected. Presently, Maine is playing the odds that it will be right on the timing of bridge repairs and replacements on roughly 1,000 structures.

One set of bridges that are of particular concern are the 35 older bridges that have piers and/or abutments built of concrete but without any steel reinforcing. With this type of bridge, sudden failures of the unreinforced concrete can occur. While these bridges

are being carefully monitored by MaineDOT, unanticipated failures have occurred in recent years. In addition to extraordinary bridge needs, there are also some extraordinary highway projects to address. Two examples are the needed rehabilitation and widening of I-295 in the South Portland to Brunswick corridor and the modernization of I-95 in Bangor. Other projects that can be classified as major highway projects are the new-alignment projects that are in various stages of study and development. These include the north-south highway from the end of I-95 in Aroostook County and the East-West Highway that includes the connector from I-395 to Route 9 in Eddington, the new border crossing at Calais/St. Stephens and a new bridge in Skowhegan. The total cost of these highway projects well exceeds \$1 billion.

<b>CURRENT EXTRAORDINARY BRIDGE NEEDS</b>	
<b>Town</b>	<b>Bridge Name</b>
Augusta	Memorial Bridge
Bath	West Approach
Boothbay	Knickerbocker
Brunswick - Topsham	Frank J. Wood
Canaan	Sibley Pond
Caribou	Aroostook River
Deer Isle/Sedgwick	Deer Isle Sedgwick
Ft. Kent/New Brunswick	International
Harpwell	Bailey Island
Greene	Turner Center
Howland	Penobscot River
Howland	Piscataquis River
Jonesport - Beals	Beals Island
Kittery-Portsmouth	Memorial
Norridgewock	Covered
Old Town - Milford	Old Town-Milford
Portland - Falmouth	Martin Point
Prospect - Verona	Waldo-Hancock
Richmond - Dresden	Maine Kennebec
Portland - S. Portland	Veterans Memorial

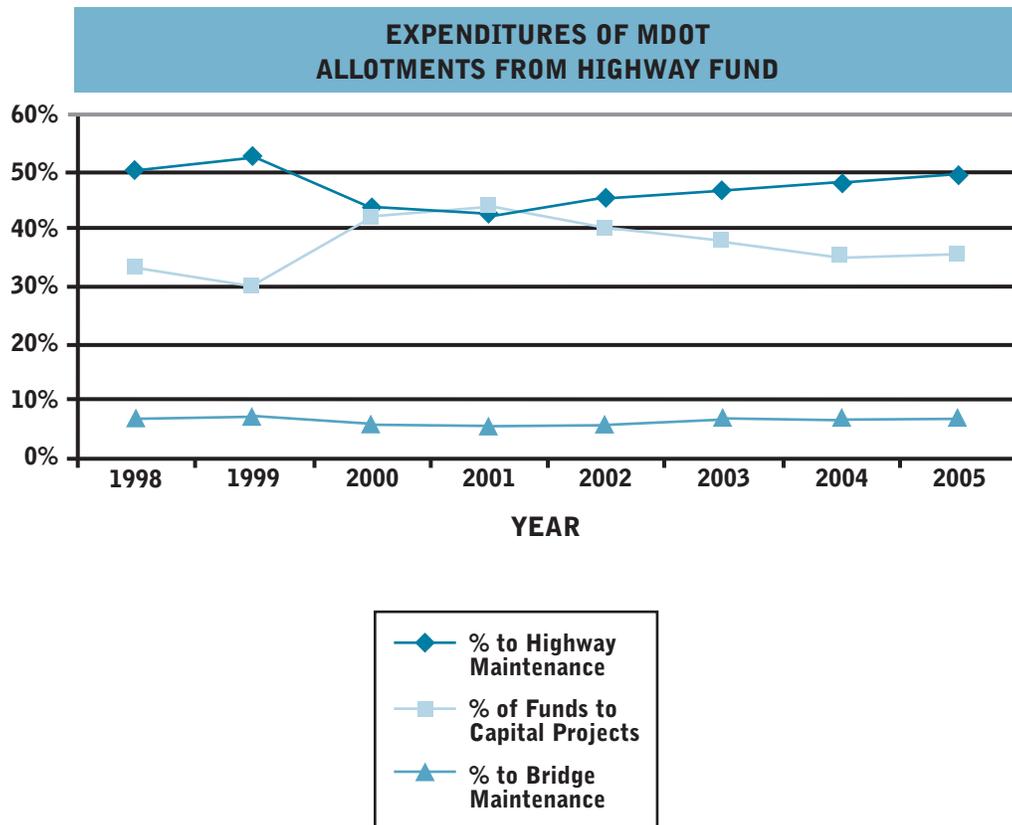
## RISING MAINTENANCE COSTS

A common financial management practice is to defer capital investments in times of scarce resources. Over the past 20 years, this practice has created the backlogs we are burdened with today. The habit of deferral continues as documented by Professor David Hartgen of the University of North Carolina at Charlotte. On a per-mile basis, Hartgen indicated that Maine now invests only one-half the national average on capital improvements for roads and bridges. He further notes that Maine's maintenance expenditures consume a much larger share of its total transportation resources – this ratio being 66% higher than the national average.

Over the past six years, roughly one-third of state highway funds allocated to MaineDOT were used for

capital projects. This ratio remained fairly constant, and much of this money was used to match federal-aid highway dollars.

On a positive note, Maine's emphasis on paving has maximized the return on highway investments made by prior generations. Between 1998 and 2002, Maine ranked better than New England and the nation on pavement conditions for major collectors, arterials and the Interstate. However, this emphasis on paving and, in particular on maintenance paving of collector roads, has masked underlying problems of inadequate drainage and poor base from the public.



## COMING CONSEQUENCES

Still, a day of reckoning awaits as the useful life of our highway and bridge assets expire. Fewer useful assets will remain for the generation to come to rely upon. They will have the burden of rebuilding a disproportionate share of the bridge and collector road inventory. They will be compelled to action by public safety, environmental and economic imperatives.

The public safety ramifications of having roads and bridges in good condition are significant. Over the past 10 years, crashes on Maine roads have generated staggering associated costs in excess of \$1 billion a year. As can be seen from the graph below, Maine consistently has a higher fatality rate than New England, but lower than the national rate. However, an upward trend in highway fatalities is of particular concern, rising from 165 in 2000 to 204 in 2003. Whether it is a sharp curve, the Augusta rotaries or a rough road that cannot be adequately cleared of snow and ice, these and many more highway conditions create avoidable safety hazards. The pay back on fixing these hazards is small compared to the human and financial cost of not making the fix.

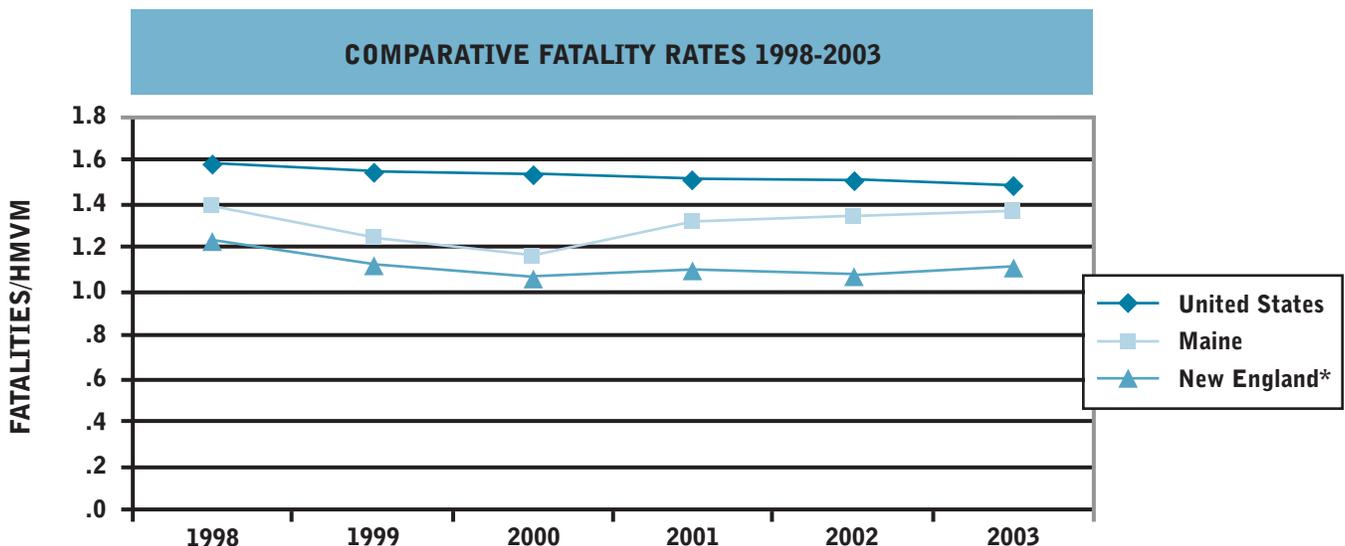
A report released earlier this year by The Road Information Program (TRIP) noted that 52% of traffic fatalities in the U.S. between 1999 and 2003 occurred



MaineDOT photo

An accident on the Carlton Bridge in Wiscasset. Mainers pay more than \$1 billion a year in costs associated with inadequate, unsafe highways and bridges.

on rural, non-interstate roads and highways, although vehicle travel on those roads only accounted for 28% of travel during that period. According to TRIP, Maine had the second highest percentage of fatalities in the nation on rural, non-interstate routes (81%); Mississippi was the only state with a higher percentage, at 84%.



\* Average Rates for ME, NH, VT, CT & RI - Based on available data

**“Roads are a significant source of pollutants to Maine’s lakes and streams. Phosphorus and storm water treatment must be an integral part of road construction in order for Maine to protect its exceptional water quality.”**

*- Peter Lowell, Executive Director,  
Lakes Environmental Association*

Environmental concerns also have come to the fore. Air quality can be improved by lessening congestion through the addition of turning lanes or the synchronization of traffic lights. Water quality can be enhanced by repairing malfunctioning drainage systems and by installing storm water separation. Highway upgrades can improve the quality of life in urban areas, making already developed lands more attractive places to work, live and recreate. If we want to be better stewards of the land, we need to revitalize our densely settled areas. Transportation investments are key to a successful revitalization strategy.

Maine has slacked off on transportation investment for more than 20 years, leading to one explanation for why Maine has an underperforming economy, a fragile tax base and a high tax burden. Tax burden is measured as the relationship between taxes raised and per capita income. Had the state made transportation investments over the past 20 years, as we did from the Great Depression on into the 1970s, Maine would have a more robust economy, a stronger state General Fund, higher per capita incomes and lower tax burdens.

One pronounced economic consequence of declining transportation investment can be found in service centers. Service centers represent just 16% of all Maine



MaineDOT photo

Traffic on Route 9 in South Portland. Communities need to work with the state to reduce the cost of urban road rehabilitation.

**“Reliable, free flowing highways create business for Maine. As an example, the improvements to Route 9 Downeast save my company 500 hours in truck travel time each year and time is money.”**

*- Vincent Tamaro, Tamaro Oil*

communities but originate over three-quarters of all Maine jobs and commerce. These communities truly are the engine of the Maine economy and, in turn, the lifeblood of the state’s General Fund. Falling transportation investment has starved the very communities where the Highway Fund can leverage private investment to build Maine’s tax base and, in turn, improve the performance of the state’s General Fund.

There are other economic consequences as well. The posting of weight restrictions on up to 2,000 miles of state roads every spring has enormous economic consequences. Posted roads inhibit the movement of goods and services and adversely affect the forest products industry, construction, boat building, aquaculture, manufactured home sales and other industries critical to Maine's rural economy. The citizens and businesses of Maine were given a dramatic demonstration of adverse consequences

when the Waldo-Hancock Bridge had to be posted to limit loads until emergency repairs could be completed. On a more positive note, the Town of Topsham was relieved of congestion by the addition of the Merrymeeting Bridge and is now seeing revitalization of its long neglected village center. Arterial improvements on Route 9 Downeast have brought Calais one hour closer to Bangor on a round trip and, with that time savings, have come new economic opportunities.



MaineDOT photo

Every spring MaineDOT posts 2,000 miles of state highways due to structural inadequacies.

# A STRATEGY FOR REINVESTMENT

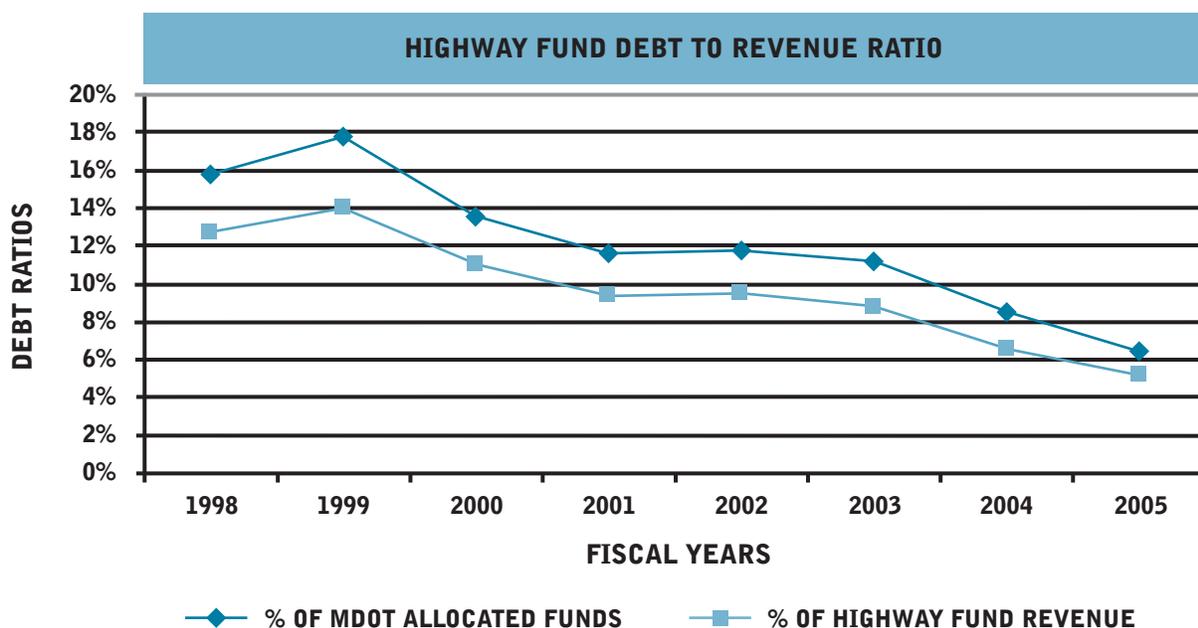
Reversing 20 years of declining financial commitment to transportation investment requires a comprehensive and multi-faceted strategy. Not only must all three levels of government shoulder their share of responsibility, new mechanisms are needed to draw in private financial participation. Furthermore, work

should begin on development of a long-term strategy for revamping Maine's highway user fees. Taken together, the topics explored below and the recommendations offered provide a starting point for shaping a comprehensive public response to Maine's highway investment crisis

## DEBT FINANCING

Maine needs to continue its policy on debt financing for transportation improvements. Since 1999, the state's Highway Fund has experienced reductions in the amount of revenue required to service Highway Fund debt. This was made possible by having the General Fund issue debt for road and bridge improvements instead of the Highway Fund. Where as much as 18% of MaineDOT resources went to debt service in 1999, now 6.5% is expended on debt service

and the overall cost to the Highway Fund for debt service is closer to 5%. This brings the Highway Fund debt to revenue ratio more in line with the General Fund debt to revenue ratio. The value of this reduction in Highway Fund debt service represents \$26 million in savings for the next biennium. To keep up with investment needs, the General Fund has begun to participate. General Fund supported bonds for road and bridge investment are essential and must be continued.



## MOTOR FUEL TAX INDEXING

Maine currently indexes its motor fuel tax, and continuing this policy will be essential to getting highway funding back on track. This initiative provides an inflation adjustment to the gas tax only if the Legislature acts favorably once every two years. Unlike income or sales taxes that grow faster than inflation, the motor fuel tax, without indexing, has historically grown at less than the rate of inflation. There is nothing automatic about motor fuel tax

indexing. It only creates the opportunity, subject to approval by the Legislature every two years, to keep pace with inflation and not even keep pace with the state's General Fund. This policy has succeeded in ending the trend of falling investment. It has not, however, placed Maine on a path that will return us to the level of effort prior generations were making.

## FEDERAL FUNDING

The federal role in financing highway construction was first defined in 1956 when the Federal Highway Trust Fund was created as part of the Interstate Highway Act. The vision of a 46,000-mile interstate system was initially financed with a 5-cent per gallon federal gasoline tax; the tax now stands at 18.4 cents per gallon. In relation to the price of a gallon of gasoline, federal motor fuel taxes are at or near a historic low.

Money from the Federal Highway Trust Fund is allocated each year by Congress, reflecting each state's role in the 256,000-mile National Highway System – which includes all the interstates plus designated primary arterials like portions of Route 1, Route 2 and Route 9. In addition to the specifics of the funding formulas, each state is granted a minimum guarantee of annual national distributions.

The funding formulas are not particularly advantageous to Maine. Maine is granted only marginally more money than its much smaller neighbors, New Hampshire and Vermont. Also, its funding per mile is low – even though maintenance costs for those miles are relatively high. Despite having the second longest interstate mileage in New England, Maine ranks fourth in New England in overall federal highway funding, behind

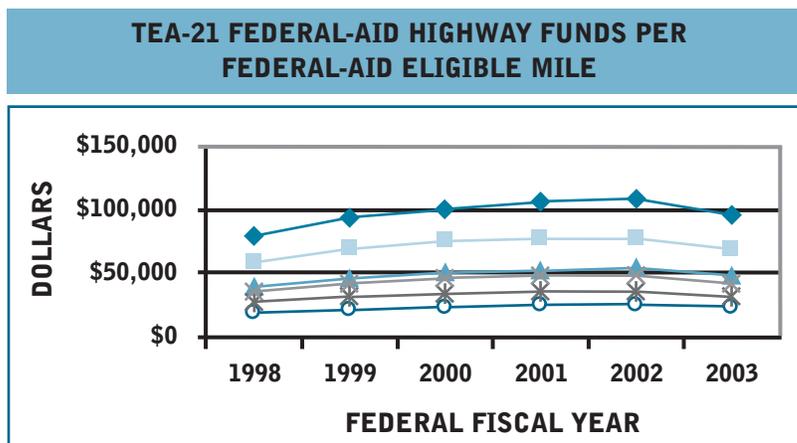
Massachusetts, Connecticut and Rhode Island, and just ahead of New Hampshire and Vermont.

A new federal authorization bill has been stalled in Congress for more than 20 months, with the House, Senate and the Bush Administration each pushing different versions of the bill. Originally proposed at \$375 billion over six years, the House version was the largest and the Bush administration's, at \$268 billion, was the smallest. Due to a veto threat by the Administration, both the House and the Senate have come down significantly, currently at \$283.9 billion and \$295 billion, respectively. Many observers believe the final bill will be below \$300 billion, but because each proposal contains many separate provisions, the actual effect on Maine is impossible to predict.

For instance, Southern and Western states, newly powerful in Congress, are pushing an increase in the minimum guarantee from 90.5 to 95 percent of what each state sends to Washington in fuel taxes. While this might enable Maine to slightly increase its funding share over TEA-21, it would probably prevent it from ever receiving more money back than it sends to Washington. And a greater than \$1 return is something that Maine officials believe is justified, citing Maine's extensive interstate mileage, high maintenance costs, and short construction season.

## THE FEDERAL PARTNERSHIP

While indexing and current debt management policies have prevented further declines in transportation investment, we need to do much more than maintain the financial status quo to address the backlog of bridge and road needs. The federal government must become a stronger player. Maine ranks last in New England for federal funding per mile of road eligible for federal aid. That is in part because Maine manages 1,778 federal aid miles per 100,000 of population, while the nation cares for 1,398 miles per 100,000 population and New England has only 1,285 miles per 100,000 population. Maine's low standing in federal aid also is due to the Minimum Guarantee set for each state in the federal transportation authorization known as TEA-21. TEA-21 is up for reauthorization, and Maine must do better on a Minimum Guarantee presently set at



◆ Rhode Island      □ Connecticut      ▲ Massachusetts  
 × New Hampshire      \* Vermont      ○ Maine

0.5263% of the total TEA-21 authorization. Were Maine's share to be that of Rhode Island's, an extra \$108 million would have come its way over six years. A rise of just 1/10 of 1% would have averaged Maine an extra \$27.5 million per year or \$165 million over the six year life of TEA-21.

## THE MUNICIPAL PARTNERSHIP

Local government also needs to be part of the solution. It can create partnerships with the state whereby tax revenues from new development captured through tax increment financing can be leveraged with state and federal resources to revitalize urban transportation networks. Municipalities also could pilot new approaches for delivering transportation improvements that avoid the millions of dollars now consumed in process costs for designing and permitting projects and for gaining community consensus. Communities must take stronger leadership roles in defining and committing to project designs. Meanwhile, the state needs to provide communities with an approach to urban road rehabilitation more in keeping with the philosophy of the MaineDOT's Collector Highway Improvement Program (CHIP) used outside of urban areas. By

**“When state-aid roads that we have to snowplow are kept in good repair by MaineDOT, our town saves money on truck repairs, our equipment lasts longer, there is less stress on our equipment operators, and we can do a better job removing snow and ice. This is good for property taxpayers.”**

- Wade E. Rainey  
 First Selectman, West Paris

maximizing prior investments in the road, minimizing property takings and minimizing environmental impacts, CHIP has reduced improvement costs by nearly 50%.

## PUBLIC-PRIVATE PARTNERSHIPS

Often traffic movement permits require a developer to make improvements that mitigate the effects of traffic generated by a development. In some cases, the private outlay is significant and the improvements required are in the midst of a highway system in need of other improvements unrelated to the development. MaineDOT needs to explore with these developers opportunities to leverage their private financial commitment into a larger improvement project. Without relieving the developer of their financial obligation, their financial commitment could be used as match against local, state and federal dollars. With matched funds a project could be undertaken that is five or more times greater, even as it also satisfies the

traffic movement permit condition. Similarly, there could be a public-private agreement that uses the developer's financial commitment to pay the cost of debt financing for that much larger project. The debt could then be paid off by proceeds from a development related tax increment financing arrangement or through the advance construction provisions found in federal law. This federal law allows a state to pay the full cost of a federally eligible project up front and then have future federal funds pay the state back up to 80% of their costs. Federal funds can be used to pay off the cost of principal and interest on a debt financed project.

## BRIDGE CAPITAL IMPROVEMENT

The emerging bubble of bridge needs confronting Maine presents an opportunity to articulate a bridge capital investment plan that spreads the demand for resources out more evenly over time. The plan's overall objective might be to have each 10 year age cohort of bridges roughly equal in number. Achieving this objective means that a future generation will not have to face the same intense concentration of bridge needs now challenging budgeters. The additional resources required today to achieve this objective could be realized by adopting a federally authorized Grant Anticipation Revenue Vehicle or GARVEE bonds that allow debt to be issued backed by future federal receipts for transportation. Maine has used this technique to accommodate the unique resource requirements for the Waldo-Hancock Bridge replacement. This use of GARVEE could address hundreds of bridge projects across the state. A set aside of federal bridge funds logically would be relied upon to service this debt. This approach also makes sense from the perspective that a new bridge today



MaineDOT photo

MaineDOT adopted federally funded GARVEE bonds to help offset some of the debt financing costs for a new Waldo-Hancock Bridge.

can be expected to remain useful for 70 to 100 years. Debt financing spreads the payment out over a larger group of highway users as opposed to only saddling today's highway user with the full cost of a long-term investment.

## TOLLS

The broader use of tolls needs to be considered where project costs are high. Current capacity problems on I-295 in the South Portland-to-Brunswick corridor or current capacity and structural issues on I-95 in Bangor are good examples of projects that could be financed through tolling. The proposed bypass between Gorham and the Turnpike is another. These projects need to be addressed, but simply cannot be accommodated with existing revenues. Section 1216(b) of TEA-21 allows tolls to be charged on an existing section of Interstate if the funds are used for needed improvements that exceed current available federal funding. The toll revenue may be used only on the section of Interstate being tolled. Toll revenues can pay the cost of principal and interest on



P.R. Hornby photo

Tolls could be used to fund new highway construction. Currently the Maine Turnpike is the state's only toll road.

bonds, toll collection costs and maintenance and operations costs. However, once the bonds are paid off the tolls must be removed.

## MOTOR FUEL TAX REPLACEMENT

National and Maine projections show that the usage of the highway system will increase at a faster rate than the revenue growth generated by traditional fuel taxes. At some point in the next decade or two, fuel tax revenue will actually begin to decrease. This is due to the projected increased use of hybrid and other highly fuel efficient vehicles and, eventually, the use of fuel cell powered vehicles. As this trend emerges, traditional fuel taxes will not provide sufficient revenue to fund necessary maintenance and capital improvements for our highway program. Some states have begun to plan for this scenario, such as the state of Oregon and a consortium of states working with the University of Iowa. The Senate version of the reauthorization bill, proposed establishing commissions to study future funding sources for the Highway Trust Fund over the next 30 years and to study the adequacy of current revenue sources versus

projected needs. Maine must continue to monitor initiatives in other states and at the Federal level and begin planning for a different revenue source for our State Highway Fund. The Legislature's Transportation Committee should study the policy responses emerging across the country and should present to the full Legislature its findings and recommendations.

## FURTHER THOUGHTS ON HIGHWAY FINANCE

In addition to the concepts previously laid out, discussions should take place, beginning with the Legislature's Joint Standing Committee on Transportation, that cover the following topics:

- Facilitating local initiatives to build new roads that offer community development benefits like removing traffic from existing neighborhoods, creating new housing stock, fostering mixed use, densely settled village centers, or commercial/industrial development. These initiatives would receive state loan support but would not be deemed state or federal aid projects. Loan forgiveness would occur if the road once opened meets state design standards and meets the criteria for designation as a major collector road or higher classification.
- Identify those highway improvements that generate significant net, new sales or income tax revenue for the state and authorize General Fund participation in those projects in some reasonable relationship to the long-term revenue gain anticipated for the General Fund.

## OREGON TO TEST MILEAGE TAX AS REPLACEMENT FOR GAS TAX

Let's pretend someone waves a magic wand and turns every car into a fuel-sipping, gas-electric hybrid. What difference would it make? The air would be cleaner. Oil imports would drop. And the transportation budgets of Oregon, Washington and almost every other state would deflate like a punctured balloon. Most money for highway construction and maintenance comes from state and federal taxes on gasoline. If people bought a lot less gas, highways would get a lot less money.

In Oregon, a state task force has concluded this scenario isn't all that far-fetched. It has proposed a possible long-term replacement for the gas tax, something no one has tried before: a tax based on how many miles you drive. Oregon State University researchers have developed technology that can distinguish miles driven in Oregon from those driven elsewhere, then allow a mileage tax to be calculated and paid at the pump in place of the state gas tax.

Next year, the researchers' mileage-recording devices are to be installed on 400 private cars in Eugene. Some of the volunteers will become the first people in the country to pay road taxes based not on how much fuel they burn, but on how far they travel. The test should be finished in early 2007. Then what? If the experiment works the task force probably would draft a bill proposing a statewide mileage tax. The task force has calculated the on-vehicle devices might add up to \$225 to the price of a new car.

It is probably unrealistic for a small state like Oregon to adopt a mileage tax by itself but the task force's work could provide the foundation for a larger state or the federal government to take the leap.

Source: Extracted from an article in the Monday, July 5, 2004 *Seattle Times*

## REGAINING LOST GROUND: CONCLUSION

Maine's Governor, Legislature, Congressional Delegation and municipal officials need to join forces to lead this generation of highway users in launching an intensive program of highway and bridge reinvestment. It must be a program that:

- Tackles the ever growing bubble of bridge needs;
- Continues the pace of extraordinary bridge improvements;
- Finishes the modernization of the arterial highway network;
- Addresses the rehabilitation needs of roughly 4,000 miles of state collector roads;
- Modernizes the South Portland-Brunswick and Bangor Interstate corridors;
- Makes strategic investments in new highways that spur economic development, and
- Eliminates congestion hot spots that are stifling economic growth.

Financing tools are available and can be shaped to meet the Maine's needs. The real challenge is in mobilizing public opinion to support bold actions. If the risks of decades of disinvestment in our highway and bridge network are adequately understood and appreciated, public opinion can be mobilized.

*Losing Ground*  was researched and written by Maine Tomorrow, a Hallowell based consulting firm. Project principals were Maine Tomorrow President, John Melrose, the former Commissioner of the Maine Department of Transportation and Maine Tomorrow Senior Associate, Paul Lariviere, former Administrator for the Maine Division of the Federal Highway Administration.

The Maine Better Transportation Association is a statewide organization advocating for long-term funding for the state's transportation infrastructure network.



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