

ResearchBrief

OFFICE OF THE NEW YORK STATE COMPTROLLER

DIVISION OF LOCAL GOVERNMENT AND SCHOOL ACCOUNTABILITY

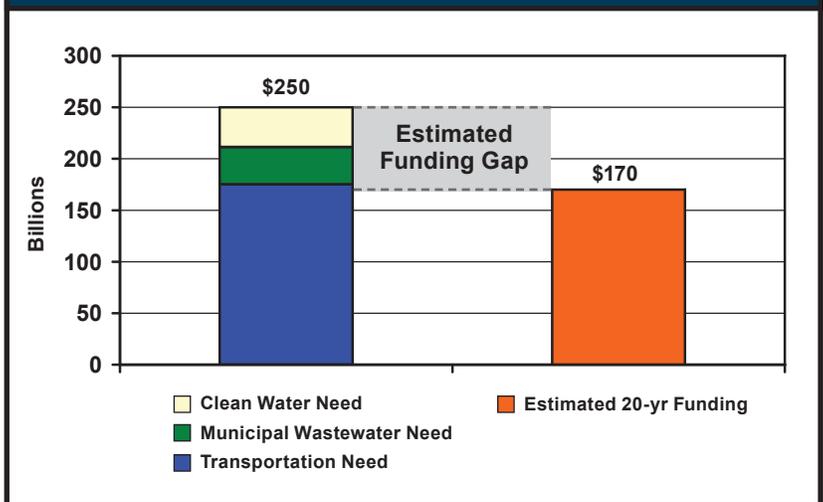
Cracks in the Foundation: Local Government Infrastructure and Capital Planning Needs

New York State's economic future may well rest upon its ability to maintain and improve its public infrastructure. Increasingly, successful economic development is dependent upon connections to an efficient intermodal transportation network, clean, safe and abundant water, a modern educational system and desirable downtowns. Such systems provide the foundation for a diversified and prosperous economy, and the capital assets that make up New York State's transportation systems, utility networks and other public facilities are the core of these essential investments.

New York's local governments are responsible for maintaining and improving a substantial portion of this infrastructure. Unfortunately, New York's communities have been underfunding their capital needs over the last several decades in part due to a sharp slowdown in state and federal investment rates.¹ Since 2003, capital expenditures as a percent of total local government expenditures has remained stagnant at about 10 percent. According to reported financial data, the growth in capital expenditures in recent years has been for general government purposes, such as municipal buildings, and in public

safety, and not in core infrastructure investments such as water, sewer and highways. As a result, recent studies have estimated investment needs of \$250.1 billion to maintain transportation (\$175.2 billion), municipal wastewater (\$36.2 billion) and clean water (\$38.7 billion) infrastructure across the State over the next twenty years.² At current spending rates it is projected that New York's local infrastructure needs may be underfunded by as much as \$80 billion. In order to reverse this trend, a sustained and coordinated commitment by federal, State and local governments to rebuilding and maintaining local infrastructure systems is essential.

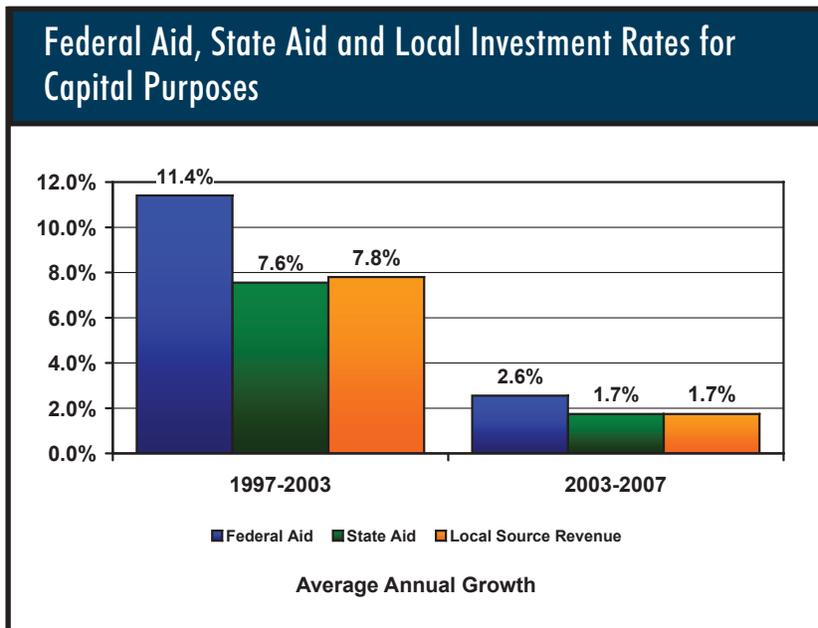
Estimated 20-Year Core Infrastructure Investment Needs and Funding for New York State



Thomas P. DiNapoli • State Comptroller

According to the U.S. Congressional Budget Office, federal infrastructure spending has not kept pace with mounting infrastructure demands. In 2006 dollars, federal government spending decreased to \$73.8 billion in 2007 from \$81.1 billion in 2002. However, the passage of the American Recovery and Reinvestment Act (ARRA) signals a renewed federal commitment to boost the economy through infrastructure investment. The ARRA provides New York with a substantial level of funding for capital improvements, including about \$500 million for water and sewer systems and \$1.1 billion for roads and highways. While much of this funding will be earmarked for “shovel ready” projects that are already on the drawing board, it will also have the effect of pulling projects forward, thereby freeing up future State and local funding for other projects, and will provide an unprecedented opportunity for a coordinated capital investment strategy to facilitate growth in the State’s diverse regional economies.

Addressing the challenges of restoring and developing New York’s infrastructure regionally offers significant advantages. Regional coordination can provide a number of important implementation benefits, such as savings generated through economies of scale, expanded capacity to manage complex building projects, maximization of federal investment and increased efficiency through the avoidance of duplication of effort. A regional approach also lends itself to “smart growth” policies that can help avoid continued land use and job sprawl and instead promote green, sustainable growth. Several key ingredients are necessary in order to accomplish these ambitious goals: improved capital planning at the local government level, starting with an affordability analysis to identify funding gaps; a sustained commitment by federal and State policymakers to increase investment for infrastructure; and a regional approach to prioritizing projects.



This report analyzes historical trends in local capital spending and the current condition of our local infrastructure. It suggests some important steps that the State and local governments need to take to improve capital planning within New York. Finally, it suggests some policy options that could help sustain investment in the State’s infrastructure and encourage more coordinated, regional approaches to investment.

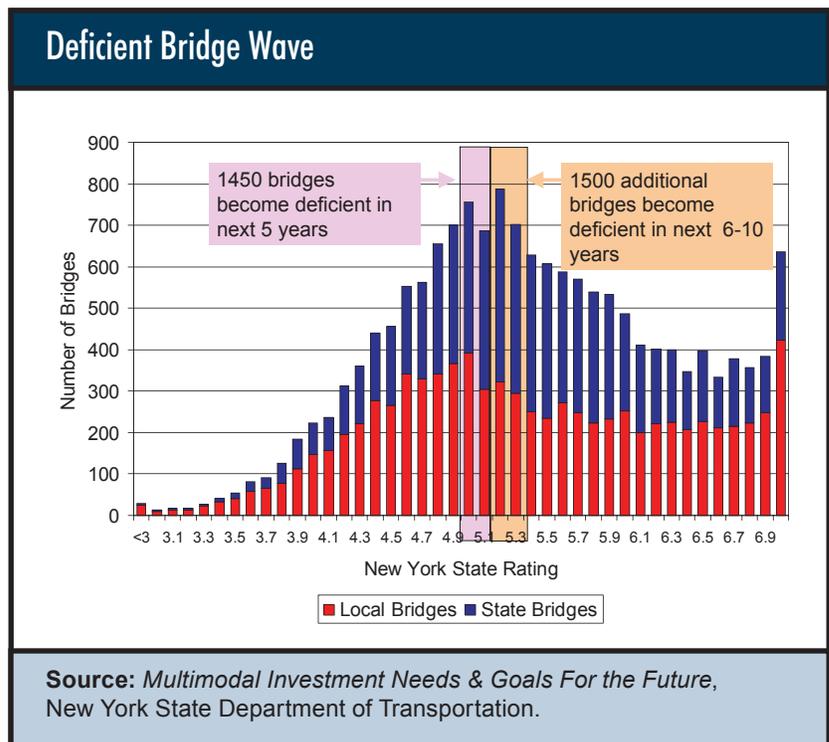
Condition of New York State's Local Infrastructure

The American Society of Civil Engineers (ASCE) recently issued its report card on the nation's infrastructure. ASCE gives the nation's infrastructure an unimpressive grade of "D", and estimates that national infrastructure systems will need an investment of \$2.2 trillion over the next five years. Lack of infrastructure maintenance is a prevalent problem across the United States, and New York is no exception.

In many cases, the infrastructure maintained by local governments is in dire need of repair and/or modernization. The following examples highlight the current condition of infrastructure systems managed by New York's local governments.

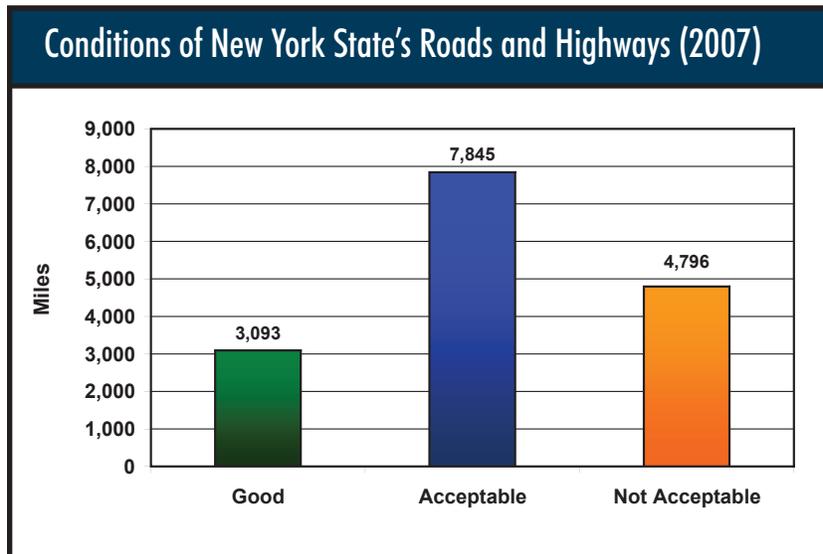
Bridges

According to data from the U.S. Department of Transportation, roughly one-third of the 8,535 bridges maintained by New York's local governments are structurally deficient or functionally obsolete. According to this data, the number of bridges structurally deficient or functionally obsolete increased slightly between 2002 and 2007 from 2,966 to 3,006 bridges.³ However, more recent data collected by the New York State Department of Transportation indicates that the number of deficient bridges will increase by 1,500 in the next few years.⁴ This means that more than half of all local bridges will be in need of repair during the next decade.



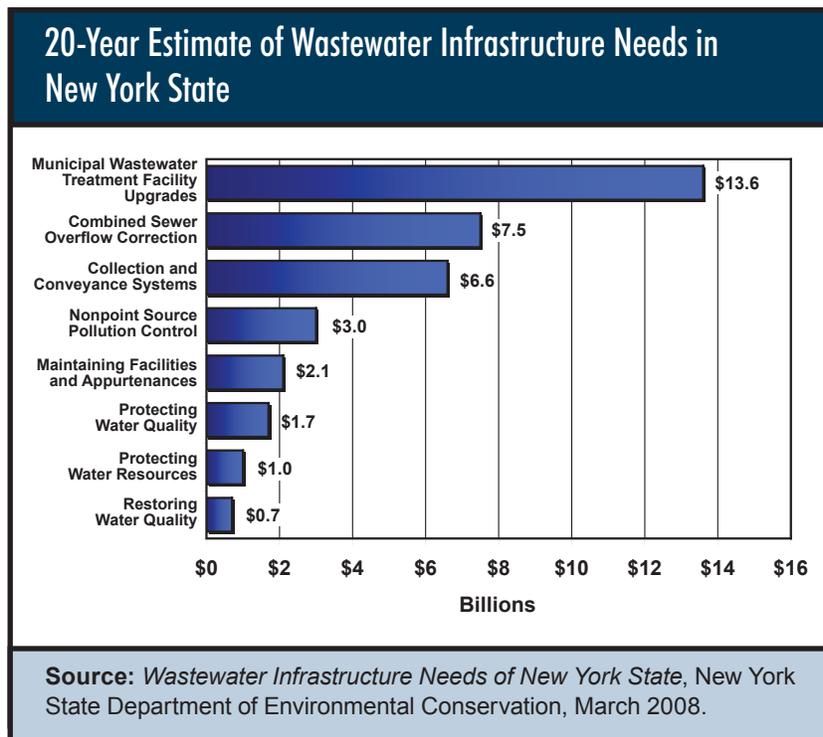
Roads and Highways

A significant number of New York's roads and highways are also in a deficient state of repair. This is particularly true for the State's urban roads. According to 2007 data from the Federal Highway Administration, 4,796 miles or nearly one-third of all New York roads and highways are in unacceptable condition, while 3,093 miles or less than 20 percent of these roads are considered in good condition.



Wastewater Infrastructure

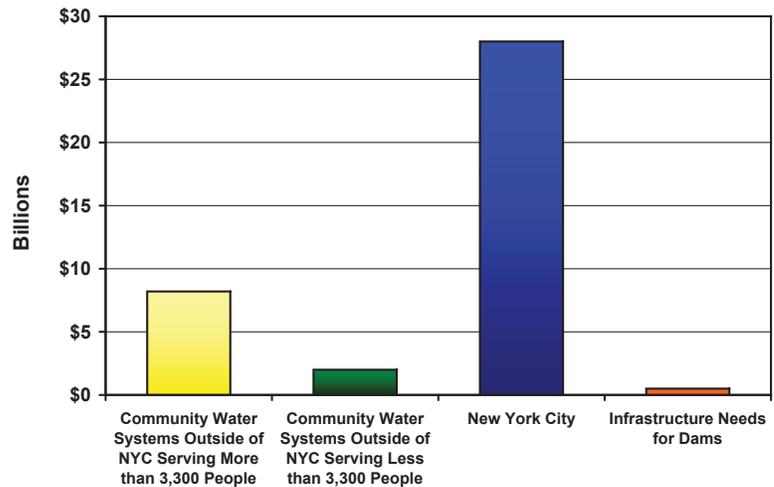
In March of 2008, the Department of Environmental Conservation issued an alarming analysis of New York's wastewater infrastructure needs. According to this study, 30 percent of the State's sewage collection systems were beyond their expected useful life as of 2004. Local governments have found it increasingly difficult to make necessary wastewater infrastructure investments as a result of declining State and federal assistance. As a result, the study estimated that \$36.2 billion will be needed over the next 20 years to maintain municipal wastewater infrastructure. Of this amount, \$13.6 billion will be needed just for municipal wastewater treatment facility upgrades.⁵



Drinking Water Infrastructure

In November of 2008, the New York State Department of Health found significant structural deficiencies in drinking water systems around the State. It is estimated that over the next twenty years, \$38.7 billion is needed to repair, replace and update New York's drinking water infrastructure. The Department of Health attributes the deterioration of New York's drinking water systems to inadequate federal and State funding.⁶

20-Year Estimate of Drinking Water Infrastructure Needs in New York State

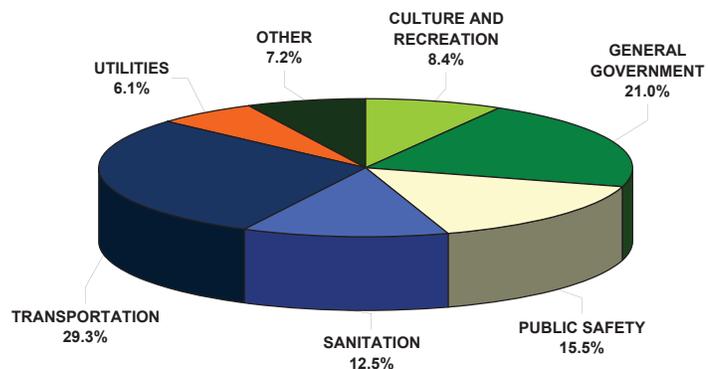


Source: *Drinking Water Infrastructure Needs of New York State*, New York State Department of Health, November 2008.

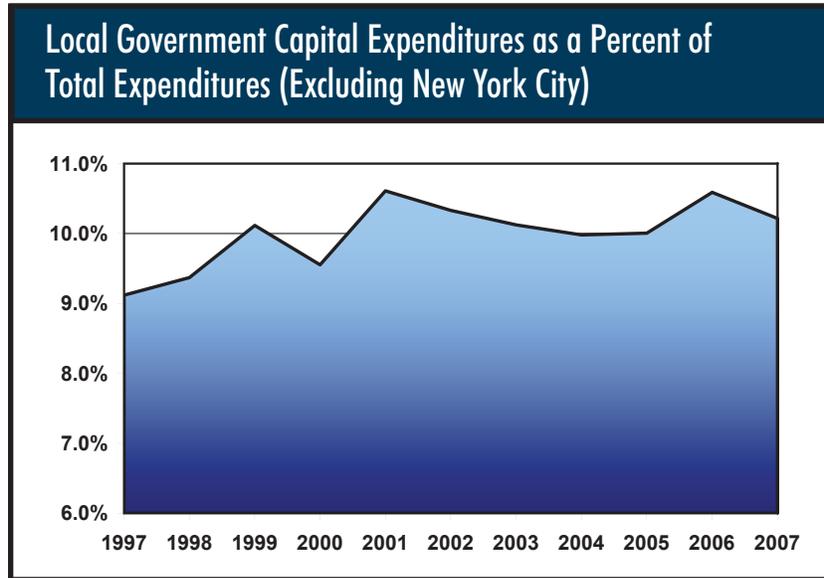
Infrastructure Investment Trends

In 2007, over 29 percent of capital spending by counties, cities, towns, villages and fire districts (excluding New York City) was related to transportation, including highway, street and bridge construction. General governmental purposes (including buildings and land acquisition), public safety, and sanitation constitute other large categories of investment.

Capital Expenditures by Function for Counties, Cities, Towns, Villages and Fire Districts (2007)



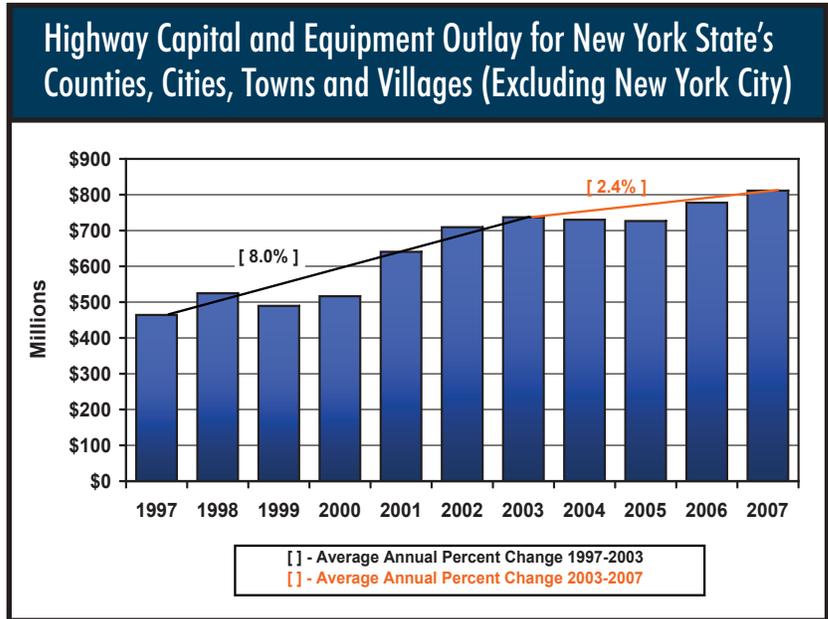
Total capital expenditures as a share of total expenditures for New York’s local governments has remained stagnant. Between 1997 and 2007, total capital expenditures for local governments increased from \$2.2 billion to \$3.7 billion or 70.2 percent. While this rate of growth exceeded the rate of growth for total expenditures (51.9 percent), a more telling picture emerges when the numbers are examined on a class by class basis and at a functional expenditure level.



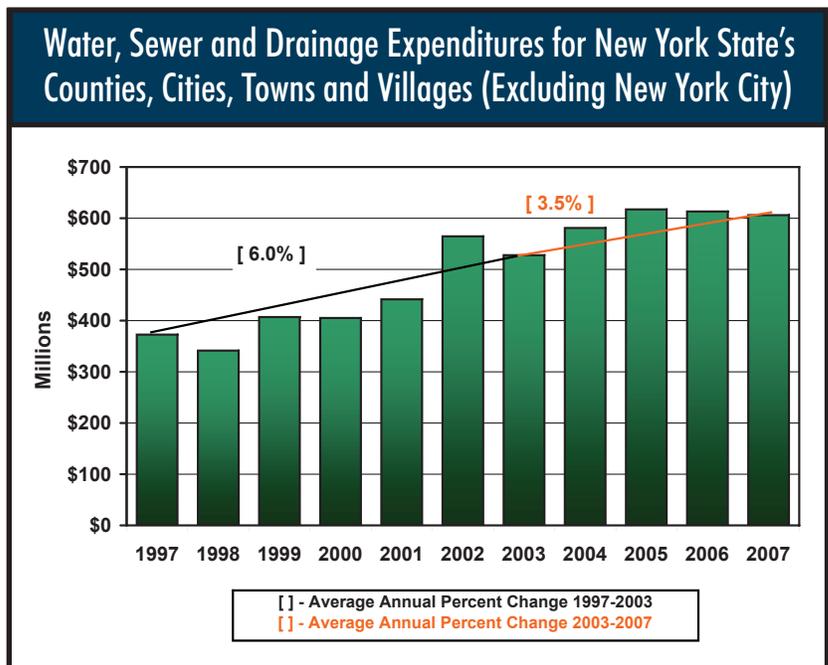
Overall, the average annual growth in capital expenditures for New York’s local governments (excluding New York City and school districts) remained relatively flat, decreasing slightly from 5.6 percent (1997-2003) to 5.2 percent (2003-2007). However, differences in the rates of growth during these time periods are more significant in certain cases. In cities, the rate of growth fell from 7.3 percent to just over 1 percent. In fire districts, the rate of growth declined from 6.5 percent to 4.7 percent. In villages, growth fell from 7.9 percent to 6.8 percent, and in towns, growth declined from 5.8 percent to 5.1 percent. Counties are the only class of government that increased capital spending over these periods – from 4.1 percent to 6.5 percent primarily due to state-mandated court and jail renovation programs.

	1997 - 2007		1997 - 2003		2003 - 2007	
	Total Percent Change	Average Annual Percent Change	Total Percent Change	Average Annual Percent Change	Total Percent Change	Average Annual Percent Change
City	60.1%	4.8%	52.9%	7.3%	4.7%	1.1%
County	63.9%	5.1%	27.6%	4.1%	28.5%	6.5%
Fire District	75.2%	5.8%	46.1%	6.5%	20.0%	4.7%
Town	71.1%	5.5%	40.1%	5.8%	22.1%	5.1%
Village	104.8%	7.4%	57.4%	7.9%	30.1%	6.8%
Total	70.2%	5.5%	39.0%	5.6%	22.5%	5.2%

Indeed, the capital investment slowdown is very apparent in these three areas. Not surprisingly, these expenditures are heavily influenced by the level of available federal and State funding. Fueled by a successful State bond act and increased federal funding, highway investments for local governments increased at an average annual rate of 8 percent from 1997 to 2003. As available funding declined during the recession of 2001 and the post-9/11 fiscal crisis, average annual investment growth declined to 2.4 percent.



Similarly, between 1997 and 2003, expenditures for water, sewer and drainage infrastructure increased by 6.0 percent on an average annual basis. However, between 2003 and 2007, growth has slowed to 3.5 percent per year.

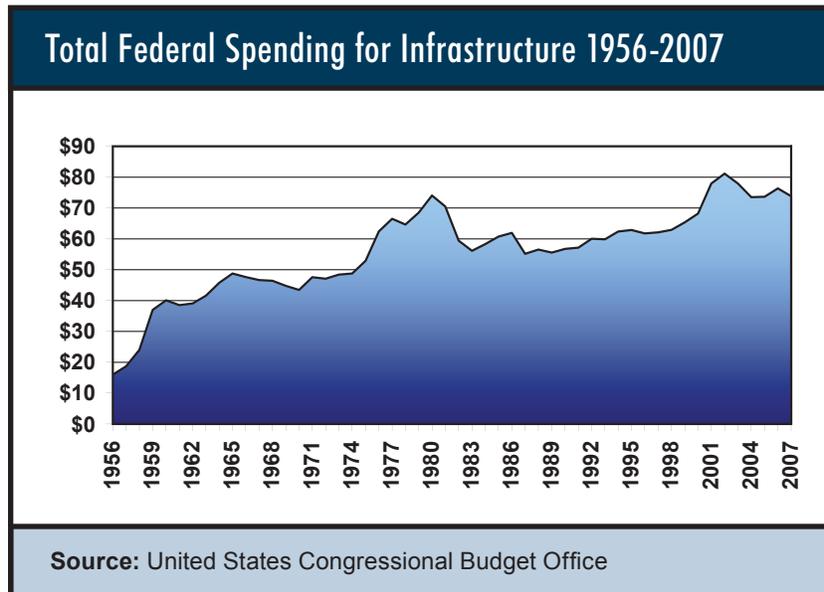


Revenue Sources Dedicated for Infrastructure Investment

Resources for capital projects typically come from a mix of current year annual revenues from taxes, assessments and fees, moneys from reserve funds, bond or note proceeds, and State and federal grants. However, the amount of revenue from these sources varies over time and is influenced by a variety of factors. For example, recessionary periods make it difficult to fund capital projects with current resources. Fiscal stress brought on by the economic downturn invariably affects taxing capacity and intergovernmental aid levels which then triggers budget cuts and deferred maintenance on capital projects. Other factors such as access to municipal debt markets can also play a role. Currently, the municipal debt market has experienced a prolonged period of instability. Market access constraints and the increased cost of issuing debt has led to reduced bonding levels and increased reliance on state and federal aid.

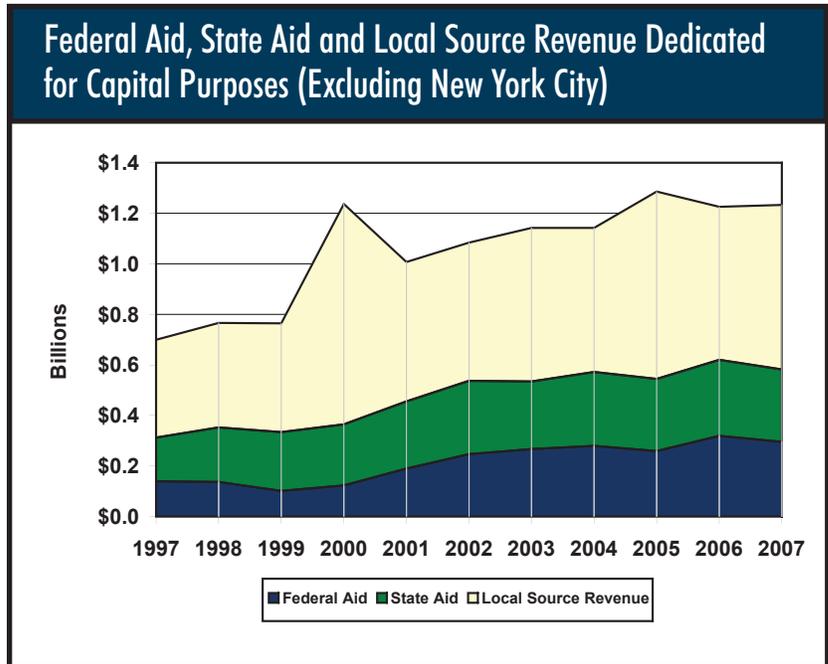
Between 1997 and 2003, federal aid for capital purposes grew by \$127 million, an average annual increase of about 11 percent. From 2003 to 2007, this growth slowed dramatically to 2.6 percent on an average annual basis. State aid to local governments for capital purposes decelerated almost as quickly, from a 7.6 average annual growth rate between 1997 and 2003 to 1.7 percent between 2003 and 2007.

Local revenues (excluding proceeds of debt) dedicated for capital investments increased steadily between 1997 and 2007 from \$387 million to \$651 million, an average annual increase of 5.3 percent. Like the trends in capital expenditures, growth in these revenues has decelerated in recent years. The greater part of this growth occurred between 1997 and 2003, a \$220 million increase compared to \$43 million between 2003 and 2007. In 2000 and 2005, these local source revenues increased dramatically and then returned to a more normal trend the succeeding years. These increases coincided with revenue infusions generated through tobacco settlement securitizations, when many local governments used these proceeds to fund capital projects.



The future of New York State's economy will continue to depend, in large part, on public investment in infrastructure. The diminishing commitment of State and federal dollars to help fund such projects in recent years has resulted in local governments having to bear a disproportionate share of this growing burden. The good news is that New York State will benefit from recent increases in federal aid for certain infrastructure purposes, such as transportation and sewer and water systems. The American Recovery and Reinvestment Act contains \$27.5 billion

nationwide for highway infrastructure funding, \$1.12 billion of which will be allocated to New York State. Additionally, New York State will receive \$435 million for clean water projects and \$87 million for drinking water infrastructure improvements. However, if current spending patterns continue over the next 20 years, it is estimated that New York's local infrastructure needs will be \$80 billion underfunded.



Looking Forward: Multiyear Capital Planning

The Office of the State Comptroller (OSC) has long encouraged local governments to develop and implement a multiyear capital planning process. This process should start with a needs assessment and an affordability analysis linked to a multiyear budget and financial plan. In other words, the process needs to start by answering some basic questions: What are the local government's capital investment priorities? How much will these projects cost to construct and operate? What is the capacity to manage these projects effectively? What is the fiscal capacity of the local government to support capital spending over time? This assessment should seek to balance capital priorities with fiscal constraints. Ideally, the capital planning process identifies all capital and major equipment needs, incorporates a process for prioritizing projects, and includes a maintenance cycle to sustain current infrastructure.

Several factors make developing these plans more important than ever before. Financing options are likely to remain unpredictable and more expensive over the next several years, given the prospects of less access to credit markets and a more negative credit outlook for local government general obligation debt.⁷ The availability of ARRA funding and renewed interest in funding infrastructure improvement at the federal level will be accompanied by increased accountability and transparency requirements that may dictate more careful planning.

To assist local governments in developing or improving their capital plans, OSC will be issuing an updated guide to capital planning accompanied by an online tutorial. This guide will provide local governments with a framework for devising capital planning processes, including:

- Capital planning models;
- Guidelines for capital improvement plan preparation, approval and presentation;
- Financing strategies for funding capital projects; and
- Techniques for long-range financial planning.

Policy Recommendations

Local government infrastructure needs are substantial and growing at the same time that the ability of local governments to maintain their investments in capital programs is severely constrained. In order to reverse this trend, the State needs to promote efforts to strengthen capital planning, increase access to funding, and coordinate local infrastructure investment. To further this goal, there are some options that policymakers could consider, including:

- **Advocate for increased funding from the federal government after the additional funds provided through the ARRA are exhausted.** Increased federal grants can help alleviate deferred maintenance and provide an aid stream that could be leveraged for significant investment. Ideally, federal investment should meet or exceed the peak levels achieved in the early 2000s.
- **Consider other pooled financing vehicles similar to the revolving loan fund operated by the Environmental Facilities Corporation (EFC).** Certain pooled financing vehicles such as EFC's revolving funds for municipal drinking and wastewater systems offer municipalities low- or no-cost access to capital. If additional federal funds are forthcoming, they could be used to capitalize a similar vehicle for other purposes, such as roads and bridges. State policymakers should investigate whether such an approach is feasible.
- **Strengthen municipal capital planning.** To ensure the effective and efficient use of any additional funds, requirements for local governments to engage in long-term capital planning should accompany any additional aid.⁸ State agencies need to provide local officials with information on best practices and examples of innovations in areas such as construction and capital financial management.
- **Urge better intergovernmental coordination.** Local governments often share responsibility for certain infrastructure systems such as roads and sewers with the State. New York and its local governments should strongly consider coordinating capital planning efforts to maximize resources and the economic benefits of infrastructure improvements.
- **Create regional structures for municipal cooperation on infrastructure investment.** To spur economic growth, the State should explore opportunities to expand regional planning and cooperation on capital investments. This approach could be modeled after the Metropolitan Planning Organizations used by the U.S. Department of Transportation to prioritize highway projects. Such an approach could provide a number of important implementation benefits, such as savings generated through economies of scale, expanded capacity to manage complex building projects, and avoiding duplication of effort. A regional approach also lends itself to "smart growth" policies that can help avoid sprawl and promote green, sustainable growth.

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- **Harness the benefits of public-private partnerships.** For large scale projects, opportunities for establishing public-private partnerships for infrastructure development and management could be an option. The New York State Commission on Asset Management⁹ has been given the responsibility to evaluate the prospective value of these public-private partnerships at the State level. On June 1, 2009, the Commission issued a series of recommendations including school construction and renovation in Syracuse and Yonkers; 300 bridge renovations across the State; improving capital investment for healthcare facilities and universal broadband access. Public-private partnership reviews in the future should be expanded to include a broader array of municipal projects.

The Environmental Facilities Corporation (EFC) Revolving Loan Programs

The Environmental Facilities Corporation administers two revolving fund loan programs that utilize federal and State capital funds and a AAA bond rating to provide local governments with low-cost or no-cost financing for certain water and sewer projects. The Clean Water State Revolving Fund provides low-cost financing to municipalities for water quality protection projects, such as construction or rehabilitation of wastewater treatment plants. The Drinking Water State Revolving Fund provides local governments with a source of low-cost financing for drinking water infrastructure improvements. Under these programs, as loans are repaid, money is made available for new projects.

Examples of potential savings:

- For a \$5.0 million Clean Water State Revolving Fund project an eligible recipient that is rated single A would save \$2.5 million in interest expense over the 30 year repayment of this debt. Furthermore, recipients may use the Clean Water State Revolving Fund short term interest free financing program to borrow up to 50 percent of the eligible project costs, resulting in approximately \$77,000 in additional interest savings.
- For a \$5.0 million Drinking Water State Revolving Fund project, a recipient with a single A rating would save \$1.4 million in interest expense over 20 year repayment of this debt (the federal authorizing statute only permits interest subsidy for up to 20 years – EFC will provide the repayment of project costs for up to 30 years, which would include up to 10 years at EFC’s AAA rating but at unsubsidized rates). Moreover, recipients may use the Drinking Water State Revolving Fund short-term interest free financing program to borrow up to 33 percent of the eligible project costs, resulting in approximately \$52,000 in additional interest savings.

This pooled financing model could be expanded to finance other infrastructure needs, such as highways or buildings.

Conclusion

As New York State and the nation endure the worst economic downturn in the past half century, revitalizing our local infrastructure offers an opportunity to promote job growth while simultaneously rebuilding for a more robust economic future. Successful economic development relies upon investment in capital assets that make up New York State's local transportation systems, public utility networks and other public facilities.

New York's public works are in a state of deterioration, and local governments do not have the necessary resources to meet the demands for restoration. The federal government has recognized the need for more attention and resources to be focused on infrastructure development, and the State of New York has a unique opportunity to assist in this effort. In this sense, the economic crisis presents an unprecedented opportunity for a coordinated capital investment strategy by federal, State and local governments to rebuild and maintain local infrastructure.

Notes

- ¹ Underfunding of capital infrastructure investment has been demonstrated in studies released by the New York State Department of Transportation, the New York State Department of Environmental Conservation, and the New York State Department of Health.
- ² *Multimodal Investment Needs & Goals For the Future*, New York State Department of Transportation and. *Wastewater Infrastructure Needs of New York State*, New York State Department of Environmental Conservation, March 2008. *Drinking Water Infrastructure Needs of New York State*, New York State Department of Health, November 2008.
- ³ U.S. Department of Transportation, Federal Highway Administration at <http://www.fhwa.dot.gov/>.
- ⁴ Statement by Astrid C. Glynn, Commissioner of the New York State Department of Transportation, Submitted to The House Transportation and Infrastructure Committee, January 22, 2009.
- ⁵ *Wastewater Infrastructure Needs of New York State*, New York State Department of Environmental Conservation, March 2008.
- ⁶ *Drinking Water Infrastructure Needs of New York State*, New York State Department of Health, November 2008.
- ⁷ *Moody's Assigns Negative Outlook to U.S. Local Government Sector*. Moody's Investors Service. April 2009.
- ⁸ There is precedent for this approach. The State Legislature required multiyear financial plans as a prerequisite generally for increased Aid and Incentives to Municipalities (AIM) payments.
- ⁹ The New York State Commission on Asset Maximization was created to study the benefits of asset maximization particularly associated with public private partnerships.

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