Growing Cracks in the Foundation:
Local Governments Still Challenged to Keep Up with Vital Infrastructure Needs
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Date of Issue: September 2014
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Executive Summary

In New York, functioning and effective water, sewer and transportation infrastructure is vital to residents, businesses and the State’s overall economy. With assistance from the federal and State governments, municipalities bear much of the responsibility for building and maintaining these critically important assets. Over the past several years, New York’s local governments have reported that they are falling behind in meeting their responsibilities to adequately maintain and improve these systems. Without a significant change in policy and resources, local governments may have difficulty meeting future infrastructure investment needs.

In December 2012, the Office of the State Comptroller (OSC) released a report, *Growing Cracks in the Foundation*, detailing the fiscal limitations and deteriorating transportation, water and sewer infrastructure affecting governments across New York State from 2002 through 2010. The report showed that while local governments continued to fund capital projects related to infrastructure, their efforts fell short due to fast-growing construction, fuel and asphalt costs. Thus, despite increased spending at the time, local governments were able to complete fewer capital maintenance projects than needed.

Competing needs for operations and infrastructure continue to represent significant challenges to New York State, and the local governments and public authorities serving its citizens. Since the prior report was issued, local governments² reported spending about $1.2 billion combined on transportation, water and sewer capital needs in 2012, a decrease of about 8 percent from the $1.3 billion reported for 2010.

Annual local government capital spending on roads and bridges in 2012 was $49 million (5 percent) less than overall spending in 2010 ($976.2 million). Combined water and sewer capital spending in 2012 was $68.9 million (19 percent) less than the $360.3 million spent in 2010.⁴ These declines likely reflect, in part, the phase-out of funding received through the federal American Recovery and Reinvestment Act of 2009 (ARRA). During this same period, the cost of fuel and asphalt rose 41 percent and 21 percent, respectively.
In 2012, the Executive and the Legislature took steps toward improving capital planning by creating the New York Works Task Force. The initiative reflects an acknowledgment that the State needs a longer term perspective and a better focus to effectively manage its capital resources. The Task Force is assigned a purpose similar to the Capital Asset and Infrastructure Council proposed by Comptroller DiNapoli in his 2013 Fiscal Reform Act, although the Task Force’s responsibilities are more narrowly defined.

The mission of the Task Force is to develop a coordinated, accelerated infrastructure investment plan for the State, and ensure that taxpayer resources are being targeted to critical infrastructure needs and job creation. With a ten-year outlook compared to the State’s longstanding five-year capital planning horizon, and recognition that the planning process should begin with a statewide infrastructure assessment, New York Works is an improvement over prior capital planning efforts. However despite this, there still is no comprehensive process in place to estimate the level of investment needed for both New York State and local government infrastructure. Such a process, long called for by Comptroller DiNapoli, would provide a stronger foundation for effective planning and investment.

In the absence of such an authoritative source, both this and the Office’s prior report cite external studies that estimate the cost of needed infrastructure repair and improvement. The December 2012 report examined these studies, spending patterns at that time, and detailed capital plans for future years, and then estimated that State and local infrastructure needs for roads and bridges and water and sewer systems over the next 20 years were underfunded by as much as $89 billion.

This follow-up report expands the analysis of the previous report; updating annual local government financial data and contrasting that to the associated local financial infrastructure needs in the most recent New York State studies. It also draws upon a new series of interviews with local officials to assess how they are working to provide the best infrastructure possible to their residents.

A 2013 study of local roads and bridges that updated a separate 2007 study by the New York State Town Highway Superintendents Association (employing a Department of Transportation (DOT) methodology), projected that the funding needs for local roads and bridges totaled $34.8 billion through the 15 year period ending 2030. To address these needs, local governments would have to invest $2.3 billion annually. Road and bridge capital spending in 2012 totaled $927.2 million.

For water infrastructure needs, a New York State Department of Health (DOH) study that found significant structural deficiencies in drinking water systems across the State and projected local investment needs for water at $10.7 billion over 20 years, requiring an average investment of $535 million annually. In 2012, local government spending on water systems totaled $88.8 million.

For sewer infrastructure, a New York State Department of Environmental Conservation (DEC) study that projected a 20-year investment need for local sewer systems of $20.2 billion, requiring an average investment of $1.0 billion annually. Spending on local government sewer systems in 2012 totaled $202.6 million.
The combined annual investment required to support the projected infrastructure needs for local roads and bridges and water and sewer systems for these studies is $3.9 billion (see Figure 1). In 2012, New York local governments capital spending totaled $1.2 billion for these systems.

Local governments must balance the need to invest in infrastructure with other spending priorities, while operating within constraints on available resources that include generally low growth in local tax bases as well as the State-imposed property tax cap. New York has sustained heavy damage from three major storms in recent years, Hurricane Irene, Tropical Storm Lee and Superstorm Sandy. Local government officials have reported that revenues have not kept pace with increasing costs, indicating they cannot complete the annual number of infrastructure projects necessary due to funding constraints.

With limited resources at their disposal, local governments need effective capital planning strategies to ensure the most cost-effective use of public funds. Such strategies should ensure that localities are able to shift their emphasis from reacting to short-term or emergency infrastructure needs to being proactive and planning for the future. Fixing potholes and broken water mains are essential activities. But, if the majority of available government spending addresses short-term problems such as these, local governments may not be able to provide the infrastructure required to support and grow their communities for the future.

State policy makers and local government officials need to work together in addressing critical infrastructure needs. State agencies such as the Department of Transportation (DOT), DEC and DOH can play an important role by creating and maintaining comprehensive, detailed assessments of major infrastructure assets at the local level, as well as at the State level. DOT, DEC and DOH have produced such studies in the past, but have not done so in recent years. For their part, local governments need to develop long term plans to assess and prioritize actual needs, and look for ways to pay for these improvements under various scenarios of potential federal and State aid.

For both the State and localities, balancing short-term financial concerns with long-term sustainability will not be easy in the face of limited revenues and other fiscal challenges. Yet assuring clean water, adequate sewer systems, and sound roads and bridges is not just one budgetary approach among many – it is an essential responsibility, both now and in the future.

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**Figure 1**

**Annual Estimated Infrastructure Needs versus 2012 Spending ($ in millions)**

<table>
<thead>
<tr>
<th>Category</th>
<th>Annual Need</th>
<th>2012 Spending</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation</td>
<td>$2,320.0</td>
<td>$927.6</td>
</tr>
<tr>
<td>Water</td>
<td>$535.0</td>
<td>$88.8</td>
</tr>
<tr>
<td>Sewer</td>
<td>$1,010.0</td>
<td>$202.6</td>
</tr>
<tr>
<td>Total</td>
<td>$3,865.0</td>
<td>$1,219.0</td>
</tr>
</tbody>
</table>

Sources: New York State Association of Town Superintendents of Highways, New York State Department of Health, New York State Department of Environmental Conservation, Annual financial reports submitted to OSC by local governments.
Local Government Efforts to Address Water, Sewer and Transportation Infrastructure Needs

One of the most basic responsibilities of local governments is the need to maintain, finance and plan improvements for vital infrastructure within the context of limited resources. A well-developed and maintained infrastructure, including roads, bridges, and water and sewer systems, is vital to the strength of the State’s local communities and their economies. Over the past several years, New York’s local governments have been challenged to adequately maintain and improve these systems. Without significant changes, local governments may have difficulty meeting future infrastructure investment needs. As New York’s municipalities have reported over the past several years they are falling behind in maintaining and improving these systems. It is likely that without a significant change in policy and resources, they will be constrained to meet future infrastructure investment needs.

The purpose of this report is to update the Office’s December 2012 prior report, Growing Cracks in the Foundation. The original report analyzed water, sewer and transportation needs as well as spending trends from 2002 through 2010. Additionally, it reported on the results of interviews with local officials across the State in 2012 to assess how financial conditions at that time affected infrastructure planning, spending and debt service. In this update, the analysis is expanded to include spending data from 2011 and 2012 (which reflect the most current, complete data available, as reported to the Office of the State Comptroller by local governments). It also analyzes what has occurred since 2010, identifies emerging issues facing local governments in 2014 and provides results of new interviews with local officials on current infrastructure spending and related issues.

While both the prior report and this report cite external studies that estimate the cost of needed local infrastructure repair and improvement, New York State currently lacks a comprehensive, systematic method or mechanism to estimate the needs associated with State and local infrastructure. The purpose in citing these studies is to provide some context to the very significant needs facing New Yorkers.

Since the prior report was issued, various indicators show strengthening in the national and State economies. However, continued growth in the economy has not increased investments in local governments’ capital assets. Overall, despite the efforts of State and local officials, estimates in the aforementioned studies, supplemented with current financial analysis and information provided by local officials suggest that much of New York’s water, sewer and transportation infrastructure needs have not been met.
Trends in Local Government Capital Spending

As a share of total local government expenditures, capital spending has remained relatively stable over the last 11 years, generally fluctuating between 9 and 10 percent of total expenditures, but decreasing to 8 percent in 2012. From 2002 through 2010, local government capital spending increased more than 30 percent, rising from $2.7 billion to $3.6 billion. However, local government capital spending in 2012 totaled $3.3 billion, a 9 percent decrease from 2010, likely reflecting the phase-out of funding associated with the American Recovery and Reinvestment Act (ARRA).

Local governments expend capital funds for a variety of purposes, including significant assets such as roads, bridges and water and sewer. Figure 2 breaks out these expenditures for the fiscal years 2002, 2010 and 2012.

Local government spending on transportation and water and sewer systems has changed little in actual dollar terms from the $1.1 billion spent in 2002. The amount rose gradually from 2005 to 2010, reaching about $1.3 billion in the latter year (likely reflecting extraordinary federal funding under the ARRA), and then fell to $1.2 billion in 2012, as shown in Figure 3. Since costs for both labor and materials have risen faster than local government infrastructure expenditures over the period, these increases may indicate reduced purchasing power in recent years, as outlined later in this report.

In 2010, the Congressional Budget Office reported that over the past two decades, state and local governments nationally accounted for about 75 percent of total public spending on transportation and water infrastructure, while the federal government accounted for the remaining 25 percent.
Issues Affecting Local Governments

**Tax Cap** – Chapter 97 of the Laws of 2011 (which became effective in 2012) limited increases in local government and school district property tax levies to the lesser of 2 percent, or the rate of inflation. The tax cap law allows local governments to levy an additional amount for certain excludable expenditures. While school districts are allowed to exclude capital spending from the tax cap limitations, such an exemption does not apply to local governments. As a result, the tax cap may restrain capital investments by local governments. Local governments may override the real property tax levy limit with at least a 60 percent vote of the governing board. Legislation enacted in 2014 created a tax rebate incentive for taxpayers if their local governments remain under their respective tax cap limits without implementing overrides. This “property tax freeze,” which will be effective for local governments for the 2015 fiscal year, may further constrain capital spending on infrastructure.

Since 2012, about 30 percent of local governments have reported that they planned to override the tax cap for the 2012 through 2014 fiscal years. This indicates that the majority of local governments are working to remain within the tax cap by limiting tax levy increases. In some cases, local governments have reduced spending or appropriated fund balances to offset the real property taxes levied. While the tax cap has provided an incentive for local governments to limit year-to-year spending increases, they must continue to balance this with the need to address declining local infrastructure.

Some local government officials point to the tax cap as another challenge to their ability to devote sufficient funds to essential capital projects. For example, Village of Coxsackie officials stated “the cap has prevented Coxsackie from adequately investing into its infrastructure as the revenue needed to fund the projects cannot be raised.” City of Plattsburgh officials explained that the high number of water and transportation infrastructure projects, combined with rising costs to maintain this infrastructure while staying below the tax cap threshold, have slowed the progress of these projects from being started and completed.

**Climate Impact** – Addressing unexpected weather-related disasters is difficult under traditional budgeting and financial planning processes. New York is still working to rebuild in the wake of billions of dollars of damage from Tropical Storm Lee and Hurricane Irene in 2011, and Superstorm Sandy in 2012. The Federal Emergency Management Agency (FEMA) estimated that, through September 2014, its costs alone for remediation and preventative measures for New York were $10.2 billion. In July 2014, the Governor announced $175 million in funding to cover local governments’ matching costs of rebuilding after Superstorm Sandy.
When disasters hit or other unexpected events damage infrastructure systems, the additional costs are often not budgeted or planned for by the municipalities. After weather-related disasters, local governments have to adjust repair and maintenance budgets and fund costs to handle some level of remediation. Aged water, sewer and transportation infrastructure – such as the systems found in many New York municipalities – are especially at risk in cases of massive flooding and other severe weather events.

Many local government officials say that such unforeseen impacts have accelerated the deterioration of New York’s water, sewer and transportation infrastructure. Penn Yan officials explained that a flood in May 2014 caused $2.5 million in needed repairs for damage to village streets from water flow, plugged storm sewer pipes, and destroyed municipal parking areas and buildings, causing planned projects to be deferred. Governments often have a difficult time funding routine maintenance, let alone finding funds for such disaster cleanups.

While even routine weather related events present problems, the harshness of the 2013-14 winter put water, sewer and transportation infrastructure to the test. As of April, 2014, Governor Cuomo had declared eight states of emergency related to weather events this year alone. For example, Albany had 61 days below freezing this winter compared to 33 days in 2012-13. Intense freezing and thawing can contribute to water main breaks, cracking roads and bridges, and potholes – all of which require additional repair and maintenance costs. While governments budget for routine repairs, they have difficulty estimating and budgeting for the impacts of unusually harsh weather. As detailed in the next section, this year’s State budget includes $40 million in one-time funding to help local governments deal with highway and bridge repairs after the severity of last winter. Such assistance, while welcomed by local officials, will not solve long-term infrastructure challenges.

During site visits, local officials highlighted this past winter’s damaging effects on their government’s water, sewer and transportation infrastructure, and the corresponding impact on their budgets. For example, Town of Brookhaven officials said their snow removal costs for the 2014 fiscal year are expected to exceed the maximum increase in the tax levy, which is capped, therefore hindering their ability to borrow the necessary funding for their infrastructure needs.
Water, Sewer and Transportation Infrastructure Spending, Conditions and Current Information

Roads and Bridges

From 2002 through 2012, annual local government spending on roads and bridges rose $147.4 million (19 percent) from $779.8 million to $927.2 million. However, 2012 spending was $49 million (5 percent) less than in 2010 ($976.2 million). The historical trend for this spending is skewed for 2009, 2010 and 2011 due to funds provided by the ARRA, which provided about $400 million in total funding for local government roads and bridges in New York during those years. As shown in Figure 4, total local government road and bridge spending in 2012 of $927.2 million was about 4 percent less than the spending level in the last year prior to ARRA, 2008, when it reached $966.4 million.

In the absence of a comprehensive process to estimate the level of investment needed for New York State and local government infrastructure, some individual studies have been done by State agencies and others examining various aspects of such needs. In 2007, a study by DOT estimated that New York will need to invest $175.2 billion by fiscal year 2030 on its State and local multimodal transportation systems. Nearly 97,000 centerline miles of roadways and almost 8,600 bridges make up local government highways. Travel on New York’s highway network exceeds 350 million vehicle miles daily, with 46 percent occurring on local roads.
A separate 2007 study (employing a DOT methodology) projected that the 20-year funding needs for local roads and bridges totaled $45.7 billion.\(^{31}\) A 2013 update to this study reported projected needs for local roads and bridges of $34.8 billion through the 15-year period ended 2030.\(^{32}\) This would require an average annual investment totaling $2.3 billion, in contrast to the $927.2 million in expenditures for 2012.

Local governments often identify greater capital needs for road and bridges than they include in their annual budgets. For example, the City of Syracuse reported that its capital needs to adequately address road conditions amount to $5.5 million annually; however, since 2007, it has budgeted between $2 million and $3 million annually, almost 50 percent less than needed. Sullivan County officials said they should be paving 40 miles of roads per year; however, due to financial constraints, they can only budget for and pave about 20 miles. Town of Union officials described their need to rehabilitate 10 miles of road each year, but they can only address 3.75 miles annually. Further, Madison County officials indicated they should replace two bridges per year, but have not replaced any bridges in the last three years due to limited funding and reduced County resources. Officials attribute the tax cap as one factor limiting available funding.

**Condition of Roads and Bridges** – In 2012, 48 percent of local roads were estimated to be in poor to fair condition, compared to 46 percent reported in 2007.\(^{33}\) DOT inspects and rates the condition of bridges statewide. As shown in Figure 5, from 2002 to 2010, the number of deficient bridges decreased from 3,209 to 2,841, respectively. It declined an additional one percent from 2010 through 2012. However, despite these improvements, as well as an increase in bridge inventory, DOT rated more than one-third of local bridges as deficient in 2012.

![Figure 5](image_url)

**Local Bridge Information**

<table>
<thead>
<tr>
<th>Year</th>
<th>Inventory</th>
<th>Deficient</th>
<th>Percentage Deficient</th>
<th>Closed</th>
<th>Percentage Closed</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>8,164</td>
<td>3,209</td>
<td>39%</td>
<td>86</td>
<td>1%</td>
</tr>
<tr>
<td>2004</td>
<td>8,114</td>
<td>3,005</td>
<td>37%</td>
<td>84</td>
<td>1%</td>
</tr>
<tr>
<td>2008</td>
<td>8,160</td>
<td>2,892</td>
<td>35%</td>
<td>73</td>
<td>1%</td>
</tr>
<tr>
<td>2010</td>
<td>8,159</td>
<td>2,841</td>
<td>35%</td>
<td>76</td>
<td>1%</td>
</tr>
<tr>
<td>2012</td>
<td>8,193</td>
<td>2,819</td>
<td>34%</td>
<td>100</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Change</strong></td>
<td><strong>29</strong></td>
<td><strong>(390)</strong></td>
<td><strong>(5%)</strong></td>
<td><strong>14</strong></td>
<td><strong>NA</strong></td>
</tr>
</tbody>
</table>

Source: NYS Department of Transportation
**Funding Issues** – As outlined earlier in this report, decision makers responsible for local roads and bridges are dealing with a variety of broader financial challenges that limit the amount of local funds available for repairs and capital improvements. Issues directly related to infrastructure, in some cases helping local governments and in others adding to their challenges, include:

- **Consolidated Highway Improvement Program Spending (CHIPS)** – The 2013-14 and 2014-15 State budgets fund CHIPS at $438 million, a 21 percent increase from 2008-09. CHIPS funding had remained flat for the five fiscal years ending in 2012-13.

- **One-Time State Funding** – The 2014-15 State budget provided $40 million in one-time State funding to help local governments make necessary repairs to highways and bridges following an exceptionally harsh winter in 2013-14. Localities will be able to use this funding on capital projects to repair and improve infrastructure and to complement their core construction programs.

- **Federal Funding** – According to the United States Department of Transportation, the federal Highway Trust Fund was in danger of encountering a shortfall and becoming insolvent in September 2014. On July 31, 2014, Congress preserved the Fund by passing a 10 month extension. The Highway Trust Fund annually provides $300 million to $350 million to New York local governments for road and bridge maintenance and repair, almost 27 percent of all capital spending on roads and bridges by local governments each year.

- **Increased Construction-Related Costs** – With the costs of fuel, asphalt and labor increasing over the period, the funds dedicated to repair, maintenance and construction may have diminished purchasing power.

  - **Materials-Related Costs** – Historically, the growth in capital spending has not kept pace with increases in fuel and asphalt costs. From 2002 through 2012, the cost of fuel and asphalt rose 310 percent and 269 percent, respectively, with fuel costs increasing 41 percent and asphalt increasing 21 percent from 2010 through 2012. In contrast, road and bridge capital spending increased just 19 percent from 2002 through 2012, and decreased 5 percent from 2010 through 2012. From January 2002 to June 2010, the cost of materials for highway and road construction rose by more than 57 percent.

  - **Prevailing Wage Rates** - Under New York State Labor Law, contractors and subcontractors must pay the prevailing rate of wage and supplements (fringe benefits) to all workers under a public work contract. Increases in prevailing wage rates impact local governments’ construction costs, as the increases in costs do not necessarily correlate with increases in available funding. Upgrades to waste water and water treatment plants as well as general construction and large paving projects are particularly affected. For example, prevailing wage rates in Albany County for Carpenters - Heavy Highway, Electricians, and Plumbers increased 33, 36 and 40 percent, respectively, over an eight year period from 2005 through 2013.
**Water and Sewer Systems**

Between 2002 and 2012, annual local government capital spending for water and sewer systems decreased $14 million (5 percent) from $305.4 million in 2002 to $291.4 million in 2012. Combined spending in 2012 was $68.9 million (19 percent) less than the $360.3 million spent in 2010, with the majority of that decline occurring in water capital spending. Further, combined water and sewer capital spending in 2012 was less than historical spending going back as far as 2002, as shown in Figure 6. The historical trend for spending is skewed for 2009 and 2010 due to funds provided by the ARRA, which provided about $218 million in total funding for local governments’ water and sewer systems.

Annual capital spending of $88.8 million on local water systems in 2012 was $59.6 million (40 percent) lower than the $148.4 million spent in 2002 and $46.9 million (35 percent) less than 2010 spending, which was $135.7 million.

In contrast, capital spending on sewer systems was $45.6 million (29 percent) higher in 2012 than in 2002, increasing from $157 million to $202.6 million. However, 2012 sewer spending was $22 million (10 percent) less than spending in 2010 ($224.6 million).

In 2008, DOH released a study that found significant structural deficiencies in drinking water systems across the State and projected local investment needs for water at $10.7 billion over 20 years, requiring an average investment of $535 million annually, in contrast to the $88.8 million spent in 2012. That same year, DEC released a study that projected a 20-year investment need for local sewer systems of $20.2 billion, an average of $1.0 billion annually. As noted above, local governments spent $202.6 million on sewer systems in 2012.

While local governments’ investments in water and sewer infrastructure have declined in recent years, partly due to the decline in ARRA funding, harsh weather appears to have caused a higher number of water main breaks and sewer problems. For example, the Board Chairman of the Binghamton-Johnson City Joint Sewage Treatment Plant reported the facility needs between $65 million and $108 million in repairs, which are scheduled to be completed in 2017. In May 2011, a 100-foot section of the plant’s wall collapsed due to flooding, resulting in more than 500,000 gallons of sewage and waste water being dumped into the Susquehanna River.
Conditions of Water and Sewer Systems – The DEC's 2008 study concluded that as of 2004, 30 percent of the State's 22,000 miles of sewer lines were beyond their expected useful life. Further, DEC concluded that 25 percent of the 610 wastewater facilities in New York (including New York City) are operating beyond their useful life expectancy and many others are outdated or have inadequate technology, which increases the likelihood of contamination of the State's drinking water. DOH reported that the State's drinking water systems are nearing or have already exceeded 100 years of age and still utilize some of their original infrastructure.

When local governments do not replace water and sewer systems, regular maintenance becomes more important to prolong the useful life of such assets. However, with many aging water and sewer systems experiencing increased incidence of damage, local governments must accommodate both the costs of ongoing maintenance and unanticipated repairs. For example, during the first five months of 2014, the City of Syracuse experienced a 42 percent increase in the number of water main breaks from 2013.

During field visits for this study, local officials expressed concerns about the risks posed by implications that inadequate water and sewer infrastructure have on their local government. Their major goals are to have long-term, sustainable drinking water systems that produce sufficient quantities of clean water, and sewage systems that can handle the capacity of their residents, businesses and nonprofit organizations such as hospitals. Officials in the Town of Brookhaven indicated that the Town does not have enough sewage infrastructure to accommodate current residents, and as a result several residents are still using cesspools for their sewage systems.

Further, Brookhaven's Commissioner of Finance stated that the lack of an adequate sewer system is hindering the Town's economic growth. Several hotel chains and retail vendors have expressed interest in expanding in the Town but given the lack of sewage capacity, these companies are limited in their ability to expand operations there. Similarly, the Village of Coxsackie's sewer treatment plant has exceeded its useful life and no longer meets Village demands. The Mayor explained that on at least three occasions each year, raw sewage must be released into the Hudson River to prevent the system from being overloaded. Replacement of the sewage treatment plant is estimated to cost about $5 million. The Village is currently in the early planning stages to construct a new facility, but construction will not start for at least another three years.

Since 2013, OSC has released five audit reports examining local government water systems that concluded deficient municipal systems resulted in unaccounted for water losses amounting to well over the federal Environmental Protection Agency’s (EPA’s) 10 percent threshold. Water loses in these municipalities ranged between 34 percent and 63 percent. The unaccounted-for water was attributed to leaks in the infrastructure, water main breaks, non-functional water meters, flushing of hydrants and fire department usage. This results in wasted chemical treatment costs, potential lost revenue and increased water rates for customers. Better maintenance and improvements to these systems could result in lower operating costs and a reduction in water loss.
Funding Issues – New issues have arisen that affect how local governments can address the gap between needs and available funding for water and sewer projects:

- Programs for Infrastructure – During 2013, the Governor announced the following funding resources to local governments to assist in infrastructure spending needs: Environmental Facilities Corporation (EFC) funding ($443.7 million in loans and $7.9 million in grants), and Water Quality Improvement Program loans ($45 million). EFC is a public benefit corporation whose mission is to provide low-cost capital and technical assistance for environmental projects in the State. A significant amount of water and sewer infrastructure funding is federal, coming through EFC. In 2014, EFC authorized a $256 million loan from available loan funds to help fund the Tappan Zee Bridge replacement project.

- In cooperation with DEC, EFC has made up to $2 million in additional grants available in 2014 for municipalities that need to construct or improve their municipal wastewater systems.

- Clean Water Act Funding – Over a 20-year span (1987 through 2008), funding was reduced 70 percent, from $2.4 billion to $687 million.

- Increased Costs – Similar to roads and bridges, costs to maintain and improve water and sewer systems continue to rise. As noted previously, over the period 2002 through 2012, the cost of fuel has risen by 310 percent. Steel costs have also fluctuated over the period, ranging from a low of $700 in 2007 to as high as $1,200 per ton in 2009.

Public-private partnerships – Public-private partnerships (P3s) involve contracts between a public agency and a private sector entity that result in greater private sector participation in the financing and delivery of public services and facilities than is normal under traditional procurement practices.

As the State progresses in addressing infrastructure needs, P3s may be a useful tool. However, local policymakers must have a clear understanding of the potential benefits and costs of P3 projects before taking action. While private investment can save the public money and improve services, it can also burden the public with costs that could have been avoided, while degrading the quality of, or limiting access to, essential services.

OSC has released two publications regarding public-private partnership agreements in the last three years, identifying the benefits and risks of these agreements and offering recommendations to avoid pitfalls and protect taxpayers.
Debt

Local governments issue capital debt to purchase new assets or upgrade existing assets with a useful life extending beyond the current fiscal year. Capital debt is the largest source of local government debt, and serves as a direct funding source for many infrastructure and capital projects such as new vehicles, highway and bridge construction, and large-scale improvements to water and sewer systems. Local governments’ capital debt has grown by about 58 percent from $14.4 billion in 2002 to $22.8 billion in 2012. Between 2010 and 2012, capital debt has grown 2.2 percent.

Figure 8 illustrates annual debt service costs as a percentage of total local government revenues from 2002 through 2012. Debt service as a percentage of revenues peaked at 9 percent in 2008 (a period of depressed revenues due to the recession), suggesting that capital-related debt service costs had reduced the budgeting flexibility of local governments. While there has been improvement through 2010, this measure has begun to increase again, from 6.9 percent in 2010 to 7.4 percent in 2012.

Source: Annual financial reports submitted to OSC by local governments
The level of debt burden and the types of capital projects financed by debt vary among local governments. For example, officials in the Town of Brookhaven indicated that the Town borrows for most of its capital project needs. The Town has more than $556.8 million in debt outstanding. Highway-related debt amounts to about 34 percent of its total debt. In contrast, officials in the City of Jamestown indicated that they have borrowed to finance smaller capital projects (e.g., upgrades, energy conservation improvements, significant rehabilitation to city buildings and public works equipment), but not for transportation, water and sewer infrastructure.

Local governments have financed a large portion of their water, sewer and transportation infrastructure work during recent years by issuing capital-related debt. While the relative burden of servicing that debt has not increased, low interest rates during the period have helped keep debt service costs low. Local governments may find it more difficult to finance future capital projects if interest rates climb in coming years.

**Non-Capital Debt** — Local governments regularly issue non-capital, short-term debt in anticipation of revenue sources (e.g., real property taxes) to generate cash flow. As reported in this Office’s prior study on this subject, the total non-capital debt for all local governments more than doubled, from $645 million in 2002 to almost $1.5 billion in 2010 and continued to rise, increasing 5 percent since 2010 from $1.5 billion in 2010 to almost $1.6 billion in 2012.

Non-capital debt may be an indication of cash flow problems and fiscal stress. As local governments run low on cash, they often issue short-term debt to meet current obligations.
Capital Planning

In 2012, the Executive and the Legislature took steps toward improving capital planning by creating the New York Works Task Force. The Task Force was assigned a purpose similar to Comptroller DiNapoli’s proposed Capital Asset and Infrastructure Council in his 2013 Fiscal Reform Act (S. 4027/A. 5436), although the Task Force’s responsibilities are more narrowly defined. The Task Force’s mission is to develop a coordinated, accelerated infrastructure investment plan for the State, and ensure that taxpayer resources are being targeted to critical infrastructure needs and job creation. An implementation council has also been created, comprising all major State agencies and public authorities, to assist the Task Force in coordinating the State’s capital investment planning process.

The New York Works initiative reflects an acknowledgment that the State needs a longer term perspective and a better focus to effectively manage its capital resources. The ten-year outlook is an improvement on the State’s longstanding five-year capital planning horizon. The Plan includes information on how much is projected to be spent by capital plan category (e.g., state of good repair, capacity optimization, and transformational initiatives), and recognizes that the planning process should begin with a statewide infrastructure assessment. Further detail on projections in the plan, the condition of existing assets, and needed repairs and replacements would provide a stronger foundation for effective planning and investment.

Additional reforms are needed to ensure that State and local capital dollars are spent in the most responsible manner for the most critical needs. Consistent with this is Comptroller DiNapoli’s longstanding call for a comprehensive inventory of the capital assets of State agencies, State and local authorities and municipal corporations. Such a step should be accompanied by broad assessment of and reporting on the condition of capital assets and future needs. This would allow policymakers to prioritize those capital projects most in need of repair and most critical to the State and local economies.

Additionally, OSC has long encouraged local governments to develop and implement a multiyear capital planning process. This process should start with a comprehensive needs assessment and an affordability analysis linked to a multiyear budget and financial plan. The process begins 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 local government’s capacity to manage these projects effectively?
- What is the local government’s fiscal capacity 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. Overall, without comprehensive, entity-wide long-term capital planning, local governments risk prioritizing projects inappropriately, deferring critical maintenance, and not funding infrastructure needs adequately.

Moreover, there may be an exponential cost to deferring maintenance. Due to the lack of available statewide data, it is unclear if and to what extent local governments are deferring maintenance. However, in cases where such projects are deferred, water, sewer and transportation infrastructure assets may deteriorate more rapidly, reducing the service life and greatly increasing the cost of repairs. For example, a study by the Cornell Local Roads Program estimated that for every $1 of deferred repair, future costs would be estimated at $4 to $5.54

Figure 9 shows that highways deteriorate slowly at first; then, when defects begin to occur, they worsen quickly. The cost of repairs to a road increases as the pavement’s condition deteriorates. Deferred maintenance has likely contributed to the declining road conditions reported in the 2007 and 2013 local road studies. The same concept may be applicable to all infrastructure.

![Figure 9](source: Cornell Local Roads Program)
To assist local governments in addressing the capital planning challenge, the Office of the State Comptroller has undertaken the following efforts:

- **Audits** – In 2009, OSC released an audit of capital planning by selected local governments. Of the 10 local governments audited, three local governments had entity-wide, long-term capital plans approved by their governing boards and three had one-year, board-adopted capital plans. Interestingly, these six municipalities spent an average of 24 percent of their 2008 operating expenditures on maintaining and improving infrastructure, while units using a departmental level approach spent about 5 percent. This significant difference in funding capital expenditures suggests that the governing boards relying on department heads for capital planning may not have identified all of the local governments’ significant capital needs.

The audit showed that less than half of the local governments used long-term capital planning to address infrastructure needs. This weakness may be common among New York local governments. For example, according to the Hudson Valley Pattern for Progress, Hudson Valley communities are not taking an asset management approach to maintaining their infrastructure. As many as 57 percent of 126 communities that responded to the organization’s survey indicated that they do not use capital improvement planning.

- **Support** – In an effort to assist local governments in developing or improving their capital plans, OSC issued an updated guide to Capital Planning and Budgeting accompanied by an online tutorial in 2011. These products 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.

- Additionally, OSC has released a capital planning template to further assist local officials in this area.
Recommendations

Local governments must continually invest in their water, sewer and transportation assets while balancing these critical needs with other important budget priorities and fiscal constraints.

State policy makers and local government officials need to work together in addressing this critical issue in the following ways:

1. **Strengthen Capital Planning** – The State should establish a Capital Asset / Infrastructure Council, with comprehensive long and short term capital planning milestones as called for in the Comptroller’s 2013 Fiscal Reform Act. Local officials should identify both their long-term and short-term infrastructure needs and work with the applicable State agencies to coordinate their approach to appropriately address these needs, adopt comprehensive capital plans and commit to funding the plans.

2. **Seek Increased Federal Funding** – State policy makers should work with the federal government to develop strategies to provide additional funding for water, sewer and transportation systems.

3. **Utilize Federal and State Grant Funding** – State and federal agencies have grant programs and other services that can assist local governments with infrastructure improvement projects and planning. Local governments should seek out additional grant funding and State and federal expertise as a component of their capital planning process.

4. **Explore Public-Private Partnerships** – Local policymakers should explore the potential of P3s to address some infrastructure needs; however, they must proceed cautiously to ensure a clear understanding of the potential benefits and costs of these projects before taking any action.

Given New York’s significant financial support for local government infrastructure, the State has an important role to play in promoting more robust capital planning. One useful step would be for agencies such as DOT, DOH and DEC to update previous studies on infrastructure and capital investment needs for localities across New York. Such information would be invaluable as policy makers consider appropriate levels of State investment in essential local infrastructure in the years ahead.
Notes


2 Unless otherwise noted, references in this report to local governments exclude New York City.

3 Most current data available.

4 ARRA provided about $618 million in additional funds to assist New York’s local government with roads, bridges, water and sewer projects.

5 The studies excluded estimates for the Metropolitan Transportation Authority, the New York State Thruway Authority and the New York State Bridge Authority, but included most other large public entities including the State of New York, City of New York, other transportation-related public authorities and local governments.


8 Drinking Water Infrastructure Needs of New York State, NYS Department of Health, November 2008. Figures exclude New York City, where needs were estimated at $28 billion. Most current data available.


10 Although this report does not cover New York City, additional information regarding the City’s infrastructure needs is available from the Center for an Urban Future, at http://www.nycfuture.org, March 2014 report: Caution Ahead: overdue Investments for New York’s Aging Infrastructure.

11 These studies do not include the potential for significant infrastructure needs that may result from future damage associated with climate change.

12 As reported by local government officials during interviews for the 2012 and 2014 studies.

13 This information comes from the Annual Update Documents (AUDs) filed with the Office of State Comptroller pursuant to General Municipal Law.
See Appendix A for a list of officials interviewed.


This analysis covers counties, cities, towns and villages, but not school districts or special districts with separate governing boards. This excludes New York City.

We compiled this information using the financial reports that local governments file with OSC.

The amounts in Figure 3 include all capital expenditures by spending category. The capital spending for roads, bridges, water and sewer detailed in Figure 3 includes direct spending for these services.


Debt service is also not exempt from the tax cap for local governments and school districts.

Article 22 of the Tax Law, Part I Section 606(FF) (bbb), Real Property Tax Freeze Credit.

Local governments, including counties, cities, towns and villages, reported information regarding tax-cap overrides to the Office of the State Comptroller for fiscal years 2012, 2013 and 2014.


We compiled this information using the financial reports that local governments file with OSC.

We compiled this information using the financial reports that local governments file with OSC.

While we did not validate the methodologies employed in these studies, they suffice collectively to convey a general sense of local infrastructure needs for these services.

*Multimodal Investment Needs and Goals for the Future*, New York State Department of Transportation, 2007. This study covered the period through 2030.


This includes New York City.


New York State Department Of Transportation.

Federal Bureau of Labor Statistics, Producer Price Indexes for material and supply inputs to construction industries. After 2010, the cost of materials for highway and road construction was reclassified with other items, making comparisons to historical data ineffective.


Based on local governments Annual Update Documents reported to OSC pursuant to General Municipal Law.

New York’s local governments (excluding New York City) did not receive ARRA funds for water and sewer projects in 2011.

Drinking Water Infrastructure Needs of New York State, NYS Department of Health, November 2008. Figures exclude New York City, where needs were estimated at $28 billion.


Although this report does not cover New York City, additional information regarding the City’s infrastructure needs is available from the Center for an Urban Future, at [http://www.nycfuture.org](http://www.nycfuture.org), March 2014 report: Caution Ahead: Overdue Investments for New York’s Aging Infrastructure.

The sewage treatment plant serves 12 municipalities and is owned by the City of Binghamton and the Village of Johnson City.


48 Includes New York City.


50 New York State DEC/EFC Wastewater Infrastructure Engineering Planning Grant.


55 *Pavement Maintenance*, by David P. Orr, PE Senior Engineer, Cornell Local Roads Program, March 2006.


# Appendix A

## List of Local Government Officials Interviewed

<table>
<thead>
<tr>
<th>Local Government</th>
<th>Title</th>
<th>Name</th>
</tr>
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<tbody>
<tr>
<td>Madison County</td>
<td>Chairman of the Board of Supervisors</td>
<td>John Becker</td>
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<td></td>
<td>Administrative Assistant to the Chairman</td>
<td>Mark Scimone</td>
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<td></td>
<td>Vice Chairman</td>
<td>Dan Degear</td>
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<td></td>
<td>Treasurer</td>
<td>Cindy Edick</td>
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<td></td>
<td>County Highway Superintendent</td>
<td>Joe Wisinski</td>
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<td>Sullivan County</td>
<td>County Administrator</td>
<td>Joshua Potosck</td>
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<td></td>
<td>Commissioner of Public Works</td>
<td>Edward McAndrew</td>
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<td></td>
<td>Commissioner of Management and Budget</td>
<td>Janet Young</td>
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<tr>
<td>Wayne County</td>
<td>County Administrator</td>
<td>James Marquette</td>
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<td></td>
<td>Fiscal Manager</td>
<td>Ken Blake</td>
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<td></td>
<td>Deputy Superintendent of Public Works</td>
<td>Scott Rolczynski</td>
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<td></td>
<td>Chairman of Public Works Committee</td>
<td>Ken Miller</td>
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<tr>
<td>City of Jamestown</td>
<td>Mayor</td>
<td>Samuel Teresi</td>
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<td></td>
<td>Department of Public Works Director</td>
<td>Jeffrey Lehman</td>
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<td></td>
<td>Comptroller</td>
<td>Joseph Bellitto</td>
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<tr>
<td>City of Plattsburgh</td>
<td>Mayor</td>
<td>James Calnon</td>
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<td></td>
<td>City Engineer</td>
<td>Kevin Farrington</td>
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<td></td>
<td>City Chamberlain</td>
<td>Richard Marks</td>
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<tr>
<td>City of Syracuse</td>
<td>Mayor</td>
<td>Stephanie Miner</td>
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<td></td>
<td>Director Office of Management and Budget</td>
<td>Mary Vossler</td>
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<td></td>
<td>Director of Administration</td>
<td>Beth Rougeux</td>
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<td>Town of Amherst</td>
<td>Supervisor</td>
<td>Barry Weinstein</td>
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<td>Town of Brookhaven</td>
<td>Commissioner of Finance</td>
<td>Tamara Wright</td>
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<tr>
<td>Town of Union</td>
<td>Supervisor</td>
<td>Rose Sotak</td>
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<td></td>
<td>Comptroller</td>
<td>Laura Lindsley</td>
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<tr>
<td></td>
<td>Commissioner of Public Works</td>
<td>Lou Caforio</td>
</tr>
<tr>
<td>Village of Coxsackie</td>
<td>Mayor</td>
<td>Mark Evans</td>
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<tr>
<td>Village of Penn Yan</td>
<td>Mayor</td>
<td>Leigh Mackerchar</td>
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<td></td>
<td>Clerk/Treasurer</td>
<td>Gary Meeks</td>
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<td></td>
<td>Director of Public Works</td>
<td>Brent Bodine</td>
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